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Revised and Supplementary Notes on and Descriptions of the Truncatipennes Group of Japan (I)

(Coleoptera, Carabidae)

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In 1967 my revision of the Truncatipennes group was published as a series of the Fauna Japonica, but it was out of print for several years. Some species being revised and added to our fauna after the publication, I made the second typescript for the revised and enlarged edition. The financial affairs, however, did not allow to publish it, and therefore I have necessarily remade it into the present abridged form.

Until studied the Truncatipennes group, I hardly recognized any taxonomical consequence in the female genitalia, but the diversity of this organ in this group attracted my attention and suggested much importance in discussing genera, subtribes and tribes. The system mentioned in the Fauna Japonica is maintained in the present paper except the position of *Ceraenephes* which I reluctantly placed in the group of *Dromius* in 1967, and for which I have established a new subtribe in this paper based on the female genitalia, yet there still remains the doubt whether this genus should be included in the tribe Lebiini or not; the subfamily Brachininae is newly divided into two tribes.

Concerning *Cymindis* I was much owed to Dr. V. EMETZ of Zoological Institute in Leningrad who was making a revision of this genus, but I do not know whether he has already published his work or not.

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[1] Retired in June, 1981.

Mr. Y. MIYAKE, Professor T. NAKANE, Mr. T. SHIBATA, and Dr. S.-I. UÉNO have kindly offered or loaned me some specimens in the course of the present revision. I wish to make grateful acknowledgment for these entomologists. Also I am greatly indebted to the editorial staffs of the Entomological Review of Japan who have accorded me much facilities for publication.

Abbreviations. L: length. LE: length of elytra. LP: length of pronotum[2]. W: width. WAP: width of apex of pronotum[2]. WBP: width of base of pronotum[2] at basal angles. WBP(s): width of base of pronotum measured on level of posterior marginal setae. WE: width of elytra. WF: width of narrowest part of frons between eyes. WH: width of head including eyes. WP: width of pronotum[2].

Key to tribes and subfamily

1. Mandibles distinctly long, projecting forward, almost three times as long as labrum, abruptly bent inward near apex; mentum small, relatively long, fairly contracted at base, buccal fissures large, so fully extending inward that submentum very small; prothorax subcylindrical, longer than wide, generally not well margined laterally; elytra often not forming lateral margin; antennae and palpi elongate, antennal segment 1 very long, narrowed at basal half; tarsal segment 4 strongly bilobed ……………………………… DRYPTINI

— Mandibles not so long, apex moderately hooked; mentum transverse, not distinctly contracted at base, buccal fissures not so well extending inward that submentum distinct, only a little narrower than mentum; elytra explanate and reflexed laterally, forming lateral margin ……………………………… 2

2. Body slender; prothorax cylindrical, lateral margins indistinct; head more or less prolonged and contracted posteriorly at tempora towards very narrow neck; antennae and legs slender; claws smooth ……………… ODACANTHINI

— Body generally not so slender; prothorax not cylindrical, with more or less distinct lateral margins; head not so prolonged at tempora in general ……… 3

3. Head distinctly pedunculate at posterior area; claws smooth……………… 4

— Head not pedunculate at posterior area ……………………………… 6

4. Antennae pubescent from segment 1, segment 1 elongate, narrowed at basal half; body pubescent; tarsi of stout form; elytra costate or striate (cf. par. 7) ……………………………… ZUPHIINI (partim)

— Antennae pubescent from segment 3 or 4, segment 1 not so elongate; body glabrous; elytra not costate ……………………………… 5

5. Head large, tumid at tempora; maxillae with movable hook at apex; suture between mentum and submentum distinct; pronotum not pedunculate at basal part; legs short, wide, tarsi of dilated form ……………… HEXAGONIINI

— Head not so large; maxillae without movable hook at apex; suture between mentum and submentum obliterated; pronotum pedunculate at basal part; legs moderately long, tarsi of slender form ……………… PENTAGONICINI

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[2] I substitute pronotum by "prothorax" in the Odacanthini.

6. Tibiae with some strong spines, apical spur stout and long, more than one-half as long as tarsal segment 1 in hind legs ······························MASOREINI
— Tibiae with usual spines or pubescence, apical spur not so long ··················7
7. Elytra costate, intervals between primary costae with two secondary costae (cf. par. 4) ··ZUPHIINI (partim)
— Elytra generally not costate but striate, if costate, intervals between primary costae without secondary costae ··8
8. Sternites normal, six in number; head with usually two supraorbital setae on either side; claws often pectinate or denticulate ····························LEBIINI
— Sternites unusually seven in ♀, eight in ♂; head with one supraorbital seta on either side; claws smooth······················ BRACHININAE (conc. tribes see text)

Tribe ODACANTHINI

Type-genus: *Odacantha* Paykull.

Odacanthites, Odacanthidae Laporte, 1835, Étud. Ent., 1: 40.

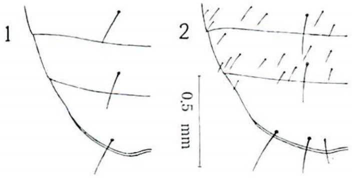
Casnoniae LeConte, 1861, Smiths. Misc. Coll., 3 (136): 21. Type-genus: *Casnonia* Latreille et Dejean.

Colliurini Bedel, 1910, Bull. Soc. Ent. France: 72. Type-genus: *Colliuris* DeGeer.

Supplemental characteristics. Female genitalia with hemisternites large, well setose or spinose at apex; apical segment with setiferous subapical foramen.

Key to genera

1. Tarsal segment 4 fully bilobed, lobes fairly longer than median length of segment 4; head impunctate; prothorax impunctate on disc, unbordered or faintly bordered on each side ···*Ophionea*
— Tarsal segment 4 not well bilobed ···2
2. Prothorax without lateral setae, lateral sides ungrooved and unbordered, disc distinctly punctate; head punctate in spp. of Asia; sternites glabrous (Fig. 1)······ ··· *Eucolliuris*
— Prothorax with at least one seta on either side, lateral sides grooved or faintly bordered; head and disc of prothorax generally impunctate ························3
3. Prothorax not prolonged but short-subcylindrical or somewhat barrel-shaped, with setae in lateral grooves, with punctures in part on dorsal side; head not well prolonged posteriorly; sternites 3 to 5 with several short but distinct setae in addition to ordinary setae in ♂ and ♀ (Fig. 2) ·······················*Odacantha*
— Prothorax fairly prolonged, dorsal side impunctate; head fully prolonged posteri-



Figs. 1, 2. Sternites 4 to 6, ♂. 1. *Eucolliuris fuscipennis* Chaudoir from Formosa. 2. *Odacantha* (*Heliocasnonia*) *aegrota* (Bates).

orly; sternites 3 to 5 glabrous ……………………………………………………………4

4. Prothorax with some setae on either side; elytra relatively short, less than twice as long as prothorax, lateral border widely interrupted behind shoulder, interval 5 with series of setiferous pores; femora with some long setae ……*Mimocolliuris*

— Prothorax with single seta on either side; elytra long, more than twice as long as prothorax, lateral border normal, interval 5 with single pore; femora without long setae ……………………………………………………………*Archicolliuris*

Genus *Eucolliuris* LIEBKE

Type-species: *Casnonia natalensis* CHAUDOIR from Central Africa (original designation).

Eucolliuris LIEBKE, 1931, Rev. Zool. Bot. Afr., 20: 284, 287. (subgenus of *Colliuris* DEGEER).

Key to species

1. Head with tempora not or weakly tumid, punctures on frons not extending beyond level of hind margin of eyes; prothorax with punctures small and sparse ……………………………………………………………… 1. *E. fuscipennis*

— Head with tempora well tumid, punctures on frons larger, extending beyond level of hind margin of eyes; prothorax with punctures large and dense…………………………………………………………………………………… 2. *E. litura*

1. *Eucolliuris fuscipennis* (CHAUDOIR)

"Atomon-kubinaga-gomimushi"

Casnonia fuscipennis CHAUDOIR, 1850, Bull. Soc. Nat. Mosc., 23 (1): 26–27 (China: "Tchusan?"); CHAUDOIR, 1862, *do.*, 35 (2): 290; CHAUDOIR, 1877, *do.*, 52 (1): 266; FAIRMAIRE, 1888, Ann. Soc. Ent. France, (6) 8: 334.

Casnonia flavicauda BATES, 1873, Trans. Ent. Soc. Lond.: 303 (Japan: Osaka; China: Foochow); BATES, 1889, Ann. Soc. Ent. France, (6) 9: 279.

Casnonia flavicanda [!] BATES: CHAUDOIR, 1877, Bull. Soc. Nat. Mosc., 52 (1): 267.

Casnonia litura SCHMIDT-GOEBEL: BOUCHARD, 1903, Ann. Soc. Ent. France, 72: 173.

Colliuris fuscipennis CHAUDOIR: JAKOBSON, 1908, Col. Russ., pars 6: 407; ANDREWES, 1947, Ark. Zool., 38 A (20): 11; LANDIN, 1955, Ark. Zool., (N. S.) 8: 406; DARLINGTON, 1968, Bull. Mus. Comp. Zool., 137: 205–206.

Colliuris flavicauda BATES: JAKOBSON, 1908, Col. Russ., pars 6: 407.

Arame fuscipennis CHAUDOIR: ANDREWES, 1919, Ann. Mag. Nat. Hist., (9) 3: 479.

Arame flavicauda BATES: ANDREWES, 1919, *do.*, (9) 3: 479.

Odacantha fuscipennis CHAUDOIR: ANDREWES, 1928, Trans. Ent. Soc. Lond., 76: 9; ANDREWES, 1929, Tijdschr. Ent., 72: 310; ANDREWES, 1930, Ann. Mag. Nat. Hist., (10) 6: 364.

Colliuris (*Eucolliuris*) *fuscipennis* CHAUDOIR: LIEBKE, 1931, Rev. Zool. Bot. Afr., 20: 288; Jedlička, 1963, Ent. Abh., 28: 491, 494, figs. 190–193.

Colliuris (*Eucolliuris*) *fuscipennis fuscipennis* Chaudoir: Liebke, 1938, Festschr. E. Strand, 4: 65, fig. 27.

Odacantha (*Colliuris*) *fuscipennis* Chaudoir: Landin, 1955, Ark. Zool., (N. S.) 8: 467.

Eucolliuris fuscipennis fuscipennis Chaudoir: Habu, 1961, Nature & Life in Southeast Asia, 1: 294; Habu, 1962, Bull. Natl. Inst. Agr. Sci., (C) no. 13: 95, 96–98, 125, fig. 5; Uéno, 1964, Kontyû, 32: 263; Habu, 1967, Faun. Jap., Carab., Truncatipen.: 16, 17–18, figs. 61, 86, pl. 9-fig. 1; Habu, 1975, Ent. Rev. Japan, 28: 71, tab. 1.

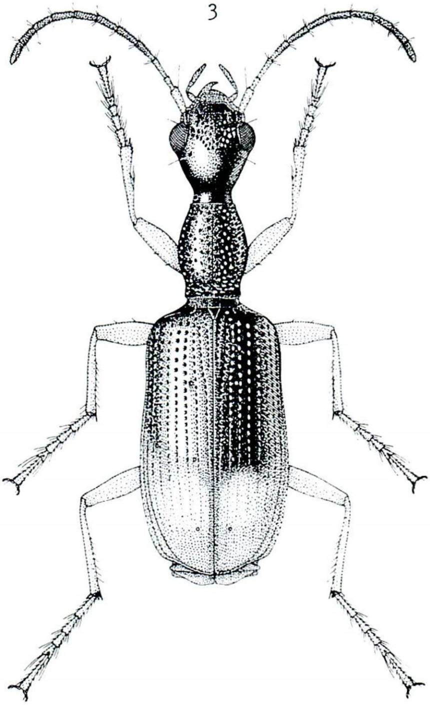


Fig. 3. *Eucolliuris fuscipennis* (Chaudoir), ♀.

Supplemental description. WH/WF 1.78–1.84, mean 1.81, WP/WH 0.78–0.84, mean 0.81, LP/WP 1.32–1.38, mean 1.35, WP/WBP 1.20–1.30, mean 1.26, WBP/WAP 1.27–1.38, mean 1.32, WE/WP 1.96–2.09, mean 2.02, in five ♂♂ and one ♀ from Ryukyus, and two ♂♂ from Yang-mei, Formosa.

Distribution. Japan: Honshu—Osaka, Osaka Pref. (after Bates, 1873); Satsunans; Ryukyus. Formosa. China. Philippines. Thailand. Burma. Malaya. Sumatra. Celebes. New Guinea. Matsumura (1895) recorded it from Hokkaido, northern part of Japan, but I delete it inasmuch as I have some doubt concerning his identification.

Remarks. I followed Liebke (1938) in my first revision and regarded the Japanese form as *E. fuscipennis fuscipennis*, but I follow in this paper Darlington (1968) who is negative concerning Liebke's classification of the subspecies.

2. *Eucolliuris litura* (Schmidt-Goebel)

"Nagasaki-kubinaga-gomimushi"

Odacantha litura Schmidt-Goebel, 1846, Faun. Col. Birm.: 22 (Burma); Andrewes, 1923, Trans. Ent. Soc. Lond.: 4–5.

Casnonia litura SCHMIDT-GOEBEL: CHAUDOIR, 1872, Bull. Soc. Nat. Mosc., 45 (1): 405, 407; CHAUDOIR, 1877, Bull. Soc. Nat. Mosc., 52 (1): 266, 267; BATES, 1883, Trans. Ent. Soc. Lond.: 278.

Colliuris litura SCHMIDT-GOEBEL: JAKOBSON, 1908, Col. Russ., pars 6: 407.

Arame litura SCHMIDT-GOEBEL: ANDREWES, 1919, Ann. Mag. Nat. Hist., (9) 3: 479.

Colliuris (*Eucolliuris*) *litura* SCHMIDT-GOEBEL: LIEBKE, 1931, Rev. Zool. Bot. Afr., 20: 288; LIEBKE, 1938, Festschr. E. STRAND, 4: 64-65, fig. 33; JEDLIČKA, 1963, Ent. Abh., 28: 491, 495-496, fig. 199.

Eucolliuris litura SCHMIDT-GOEBEL: HABU, 1962, Bull. Natl. Inst. Agr. Sci., (C) no. 13: 95, 98-100, 125, fig. 6; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 49, pl. 25, fig. 5; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 16, 18-19, pl. 9-fig. 2.

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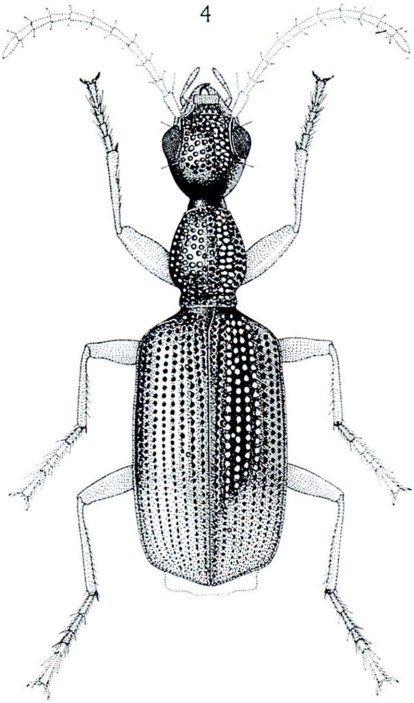

Fig. 4. *Eucolliuris litura* (SCHMIDT-GOEBEL) from Burma.

Distribution. Japan: Kyushu—Nagasaki, Nagasaki Pref. (after BATES, 1883). Java. Burma. I have not yet seen any specimen from Japan.

Genus *Odacantha* PAYKULL

Type-species: *Attelabus melanura* LINNÉ from Sweden (monotypic).

Odacantha PAYKULL, 1798, Faun. Suec., 1: 169.

Odontacantha GEMMINGER and HAROLD, 1868, Cat. Col., 1: 88. Unjustified emendation.

Key to subgenera

1. Elytral lateral mergin without setae, interval 1 without setiferous pores .... *Odacantha*

— Elytral lateral margin with several setae, interval 1 with some setiferous pores .... *Heliocasnonia*

Subgenus *Odacantha* PAYKULL

3. *Odacantha* (*Odacantha*) *puziloi* SOLSKY

"Nakaguro-kibane-kubinaga-gomimushi"

Odacantha Puziloi SOLSKY, 1875, Horae Soc. Ent. Ross., 21 : 264–265, pl. 1, fig. 5 (E. Siberia : "lac Khanka ; Vladivostok").

Colliuris puziloi SOLSKY : JAKOBSON, 1908, Col. Russ., pars 6 : 407.

Casnonia Puziloi SOLSKY : KANO, 1930, Kontyû, 4 : 128.

Colliuris (*Odacantha*) *Puziloi* SOLSKY : CSIKI, 1932, Col. Cat., pars 124 : 1529 ; LIEBKE, 1938, Festschr. E. STRAND, 4 : 66, fig. 37.

Odacantha puziloi SOLSKY : HABU, 1957, Akitu, 6 : 15–16, fig. 1 ; HABU, 1962, Bull. Natl. Inst. Agr. Sci., (C) no. 13 : 102–104, 125, figs. 8, 13, 31 ; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2 : 49, pl. 25, fig. 6 ; HABU, 1967, Faun. Jap., Carab., Truncatipen. : 20–23, figs., 63, 67, 85 pl. 9-fig. 3.

Colliuris (*Odacantha*) *puziloi* SOLSKY : JEDLIČKA, 1963, Ent. Abh., 28 : 492, 496.

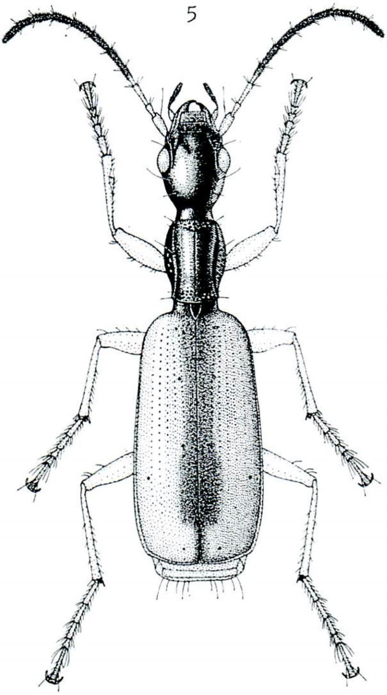

Fig. 5. *Odacantha* (*Odacantha*) *puziloi* SOLSKY, ♀.

Supplemental description. WH/WF 1.60–1.67, mean 1.64, WP/WH 0.78–0.81, mean 0.80, LP/WP 1.38–1.47, mean 1.42, WP/WBP 1.16–1.22, mean 1.19, WBP/WAP 1.25–1.33, mean 1.29, WE/WP 2.02, 2.07, 2.10 (♂), 2.15, 2.18 (♀), in three ♂♂ and two ♀♀.

Distribution. Japan : Hokkaido ; Honshu. E. Siberia. N. China : Manchuria (after NAKANE, 1963 b).

Subgenus *Heliocasnonia* LIEBKE

Type-species : *Casnonia metallica* FAIRMAIRE from Indo-China (original designation).

Heliocasnonia LIEBKE, 1938, Festschr. E. STRAND, 4 : 48, 67. (subgenus of *Colliuris* DEGEER).

Key to species

1. Elytra shiny black, with bronze tinge, slightly brownish apically; aedeagus gently bent ·· 4. *O. metallica*
— Elytra shiny yellowish or reddish brown; aedeagus distinctly bent························ ·· 5. *O. aegrota*

4. *Odacantha* (*Heliocasnonia*) *metallica* (FAIRMAIRE)

"Buronzu-kubinaga-gomimushi"

Casnonia metallica FAIRMAIRE, 1888, Ann. Soc. Ent. France, (6) 8: 334 (Indo-China: Tongking).

Arame metallica FAIRMAIRE: ANDREWES, 1919, Ann. Mag. Nat. Hist., (9) 3: 479.

Odacantha metallica FAIRMAIRE: ANDREWES, 1930, Cat. Ind. Ins., part 18: 231.

Colliuris (*Heliocasnonia*) *metallica* FAIRMAIRE: CSIKI, 1932, Col. Cat., pars 124: 1529; LIEBKE, 1938, Festschr. E. STRAND, 4: 67, fig. 38; JEDLIČKA, 1963, Ent. Abh., 28: 492, 497.

Odacantha (*Heliocasnonia*) *metallica* FAIRMAIRE: HABU, 1962, Bull. Natl. Inst. Agr. Sci., (C) no. 13: 102, 105–106, 126, figs. 9, 14, 29; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 49, pl. 25, fig. 7; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 20, 23–24, figs. 68, 83, pl. 9-fig. 4; HABU, 1975, Ent. Rev. Japan, 28: 71, tab. 1.

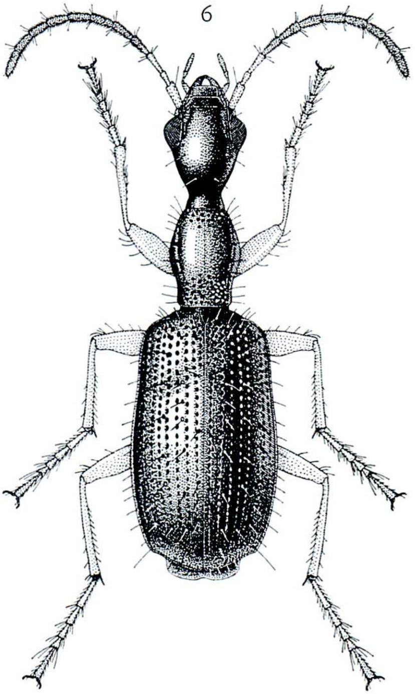

Fig. 6. *Odacantha* (*Heliocasnonia*) *metallica* (FAIRMAIRE), ♂.

Supplemental description. WH/WF 1.71–1.75, mean 1.74, WP/WH 0.80–0.82, mean 0.81, LP/WP 1.37–1.40, mean 1.39, WP/WBP 1.24–1.28, mean 1.25, WBP/WAP 1.32–1.41, mean 1.38, WE/WP 2.07–2.17, mean 2.11, in four ♂♂ from Japan.

Distribution. Japan: Satsunans; Ryukyus. Philippines: Luzon (T. IIDA leg.). S. China (after ANDREWES, 1930 c). Indo-China.

5. *Odacantha* (*Heliocasnonia*) *aegrota* (BATES)

"Chabane-kubinaga-gomimushi"

Casnonia aegrota BATES, 1883, Trans. Ent. Soc. Lond.: 278 (Japan: Niigata; Tokyo).

Casnonia Puziloi SOLSKY: SCHÖNFELDT, 1887, Cat. Col. Japan: 53.

Odacantha aegrota BATES: ANDREWES, 1919, Ann. Mag. Nat. Hist., (9) 3: 475; OHKURA and UÉNO, 1955, Coloured Illustr. Ins. Japan, Col. : 109, pl, 40, fig. 149; OHKURA and UÉNO, 1955, *do.* (rev. ed.): 44, pl. 12, fig. 223; KAWADA and KATO, 1959, Natural Colour, Common Ins. Japan: 87, pl. 73, fig. 1023; NAKANE, 1975, Gakken Chû-Kô-Sei Zukan, Ins. 2 (Col.): 341, pl. 44.

Colliuris (*Eucolliuris*) *aegrota* BATES: CSIKI, 1932, Col. Cat., pars 124: 1527.

Colliuris (*Heliocasnonia*) *aegrota* BATES: LIEBKE, 1938, Festschr. E. STRAND, 4: 67, fig. 39; JEDLIČKA, 1963, Ent. Abh., 28: 491, 497.

Odacantha (*Heliocasnonia*) *aegrota* BATES: HABU, 1962, Bull. Natl. Inst. Agr. Sci., (C) no. 13: 102, 106–108, 126, figs. 10, 12, 30; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 49, pl. 25, fig. 7; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 20, 24–26, figs. 5, 62, 69, 71, 72, 84, pl. 1-fig. 1.

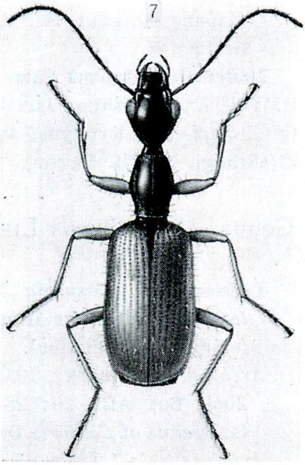

Fig. 7. *Odacantha* (*Heliocasnonia*) *aegrota* (BATES), ♀.

Supplemental description. WH/WF 1.66–1.72, mean 1.69 (♂), 1.62–1.66, mean 1.64 (♀), WP/WH 0.82–0.87, mean 0.84, LP/WP 1.23–1.36, mean 1.31, WP/WBP 1.23–1.30, mean 1.27, WBP/WAP 1.38–1.48, mean 1.42, WE/WP 1.93–2.15, mean 2.04, in five ♂♂ and five ♀♀.

Distribution. Japan: Hokkaido—Okushiri Is. (after INOUYE, 1966); Honshu; Shikoku—Takamatsu, Kagawa Pref. (M. SATOU leg.).

Genus *Mimocolliuris* LIEBKE

Type-species: *Ophionea Chaudoiri* BOHEMAN from S. E. Asia (original designation).
Mimocolliuris LIEBKE, 1933, Stylops, 2: 207. (subgenus of *Colliuris* DEGEER).

Subgenus *Paramimocolliuris* HABU

Type-species: *Mimocolliuris insulana* HABU from Japan.
Paramimocolliuris HABU, 1979, Ent. Rev. Japan, 33: 76.

6. *Mimocolliuris* (*Paramimocolliuris*) *insulana* HABU

"Futahoshi-kuro-kubinaga-gomimushi"

Mimocolliuris (*Paramimocolliuris*) *insulana* HABU, 1979, Ent. Rev. Japan, 33: 76–79, figs. 3, 4–8 (Japan: Ishigaki Is.; Amami-ôshima Is.).

Distribution. Japan: Satsunans—Mt. Yui, Amami-ôshima Is. (through Mr. T. SHIBATA); Ryukyus—Ishigaki Is. (through Mr. M. SATOU).

Genus *Archicolliuris* LIEBKE

Type-species: *Casnonia bimaculata* REDTENBACHER from India (original designation).

Archicolliuris LIEBKE, 1931, Rev. Zool. Bot. Afr., 20: 284, 291. (subgenus of *Colliuris* DEGEER).

Archicasnonia LIEBKE, 1938, Festschr. E. STRAND, 4: 51, 73. (subgenus of *Colliuris* DEGEER). Type-species: *Colliuris Burgeoni* LIEBKE from Central Africa (original designation).

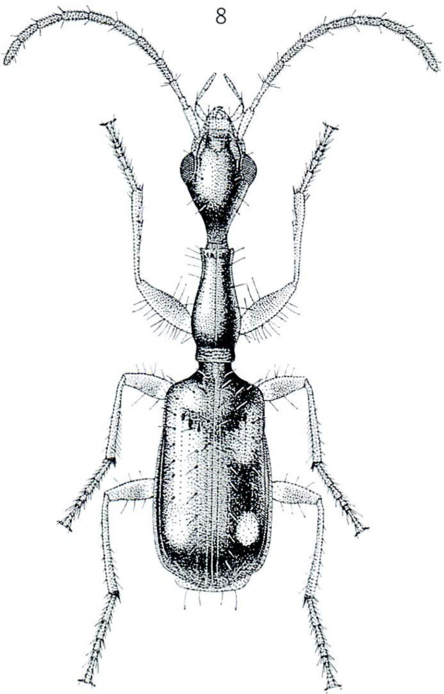

Fig. 8. *Mimocolliuris* (*Paramimocolliuris*) *insulana* HABU, ♀.

7. *Archicolliuris bimaculata nipponica* HABU

"Kuroobi-kubinaga-gomimushi"

Odacantha bimaculata REDTENBACHER: TERANISHI and TAKIGUCHI, 1934, Kansai Konchû Zasshi, 2: 97; MIYASHITA, 1936, Mushi, 9: 8.

Ophionea nigrofasciata SCHMIDT-GOEBEL: HABU, 1950, Icon. Ins. Jap. (rev. ed.): 944.

Colliuris (*Archicolliuris*) *bimaculata* REDTENBACHER: HABU, 1952, Shin-Konchû, 5 (3): 44; JEDLIČKA, 1963, Ent. Abh., 28: 492, 497–498, pl. 5, fig. 37 (partim).

Archicolliuris bimaculata REDTENBACHER: OHKURA and UÉNO, 1955, Coloured Illustr. Ins. Japan, Col.: 109, pl. 40, fig. 148; OHKURA and UÉNO, 1955, *do.* (rev. ed.): 44, pl. 12, fig. 222; KAWADA and KATO, 1959, Natural Colour, Common Ins. Japan: 87, pl. 73, fig. 1022; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 49, pl. 25, fig. 4; NAKANE et al., 1966, Hyôjun Genshoku Zukan Zenshû, 2: 47, pl. 22, fig. 2.

Archicolliuris bimaculata bimaculata REDTENBACHER: HABU, 1962, Bull. Natl. Inst.

Agr. Sci., (C) no. 13: 109–111, 126, figs. 3, 15, 31.

Archicolliuris bimaculata nipponica HABU, 1963, Kontyû, 31: 174–175, figs. 2, 4 (Japan: many localities); HABU, 1967, Faun. Jap., Carab., Truncatipen.: 27–30, figs. 31, 58, 74, 76, 78, 82, pl. 10-fig. 1.

Archicolliuris bimaculata HABU: NAKANE, 1975, Gakken Chû-Kô-Sei Zukan, Ins. 2 (Col.): 371, pl. 44.

Supplemental description. WH/WF 1.71–1.77, mean 1.75 (♂), 1.66–1.77, mean 1.69 (♀), WP/WH 0.67–0.74, mean 0.71, LP/WP 1.97–2.17, mean 2.07, WP/WBP 1.17–1.27, mean 1.22, WBP/WAP 1.50–1.58, mean 1.54, WE/WP 2.30–2.54, mean 2.44, in five ♂♂ and five ♀♀.

Distribution. Japan: Honshu; Shikoku; Kyushu. I have not yet seen any specimens from the Satsunans and the Ryukyus.

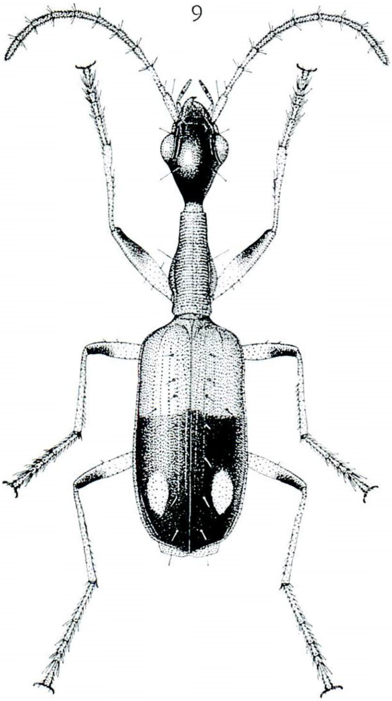

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Fig. 9. *Archicolliuris bimaculata nipponica* HABU, ♂.

Genus *Ophionea* KLUG

Type-species: *Cicindela cyanocephala* FABRICIUS [=*Ophionea indica* (THUNBERG)] from India (designated by ESCHSCHOLTZ, 1829).

Ophionea KLUG, 1821, Ent. Bras. Spec.: 298.

Casnoidea LAPORTE, 1834, Étud. Ent., 1: 40–41. Type-species: *Cicindela cyanocephala* FABRICIUS from India (monotypic and original designation).

Key to subgenera

1. Prothorax without lateral setae ·· *Ophionea*
— Prothorax with one lateral seta on either side ································ *Setophionea*

Subgenus *Ophionea* KLUG

Key to species

1. Elytra with two blackish blue bands, each at shoulder and posterior half though apical area reddish brown ··· 8. *O. indica*

— Elytra with one black band near middle .... 9. *O. nigrofasciata*

8. *Ophionea* (*Ophionea*) *indica* (Thunberg)

"Kubinaga-gomimushi"

Attelabus indicus Thunberg, 1784, Nov. Ins. Spec., 3: 68, fig. 81 (India).

Cicindela cyanocephala Fabricius, 1798, Ent. Syst. Suppl.: 60 (India).

Odacantha cyanocephala Fabricius: Fabricius, 1801, Syst. Eleuth., 1: 229.

Casnonia cyanocephala: Latreille and Dejean, 1823, Hist. Nat. Icon. Ins. Col. Eur., 1: 130, pl. 8, fig. 6.

Casnonia cyanocephala Fabricius: Dejean, 1825, Spec. Gén. Col., 1: 173–174.

Ophionea cyanocephala Fabricius: Schmidt-Goebel, 1846, Faun. Col. Birm.: 20; Motschulsky, 1855, Étud. Ent., 4: 52; Bates, 1873, Trans. Ent. Soc. Lond.: 303; Bates, 1886, Ann. Mag. Nat. Hist., (5) 17: 199; Bates, 1889, Ann. Soc. Ent. France, (6) 9: 379; Bates, 1891, Bull. Soc. Ent. Belg., 35 (Compt. Rend.): cccxxxv; Bates, 1892, Ann. Mus. Civ. Stor. Nat. Genova, (2) 12 (32): 380; Kraatz, 1897, Deutsch. Ent. Zeitschr.: 60; Heyne and Taschenberg, 1908, Exotischen Käfer: 13, pl. 3, fig. 13; Maindron, 1910, Bull. Soc. Ent. France: 35; Matsumura, 1910, Die Schädlichen und Nützlichen Insekten vom Zuckerrohr Formosas: 49, 82, pl. 30, fig. 5; Andrewes, 1921, Trans. Ent. Soc. Lond.: 161; Andrewes, 1923, Trans. Ent. Soc. Lond.: 4; Matsumura, 1931, Illustr. Common Ins. Japan, 3: 11 (in Jap.), 17 (in Eng.), pl. 3, fig. 16; Kato, 1933, Three Colour Illustr. Ins. Japan, 9: pl. 45, fig. 7; Hirayama, 1940, Genshoku Kôchû Zufu: 89, pl. 32, fig. 3.

Casnoidea cyanocephala Fabricius: Dupuis, 1913, Ann. Soc. Ent. Belg., 57: 270.

Ophionea indica Thunberg: Andrewes, 1919, Ann. Mag. Nat. Hist., (9) 3: 475–476; Andrewes, 1924, Miss. Ind. Babault, Carab.: 116; Araki, 1936, Kansai Konchu Zasshi, 4; 48–49, fig.; Liebke, 1938, Festschr. E. Strand, 4: 79, fig. 55; Andrewes, 1947, Ark. Zool., 38 A (20): 10; Habu, 1950, Icon. Ins. Jap. (rev. ed.): 944, fig. 2683;

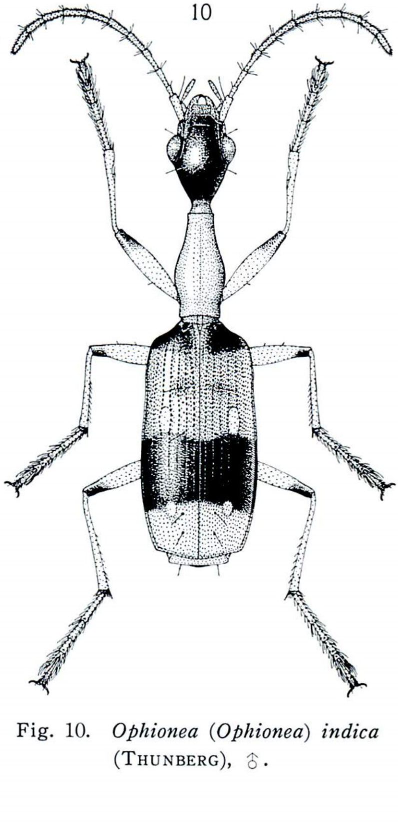

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Fig. 10. *Ophionea* (*Ophionea*) *indica* (Thunberg), ♂.

LANDIN, 1955, Ark. Zool., (N. S.) 8 : 408, 467 ; OHKURA and UÉNO, 1955, Coloured Illustr. Ins. Japan, Col. : 109, pl. 40, fig. 147 ; OHKURA and UÉno, 1955, *do.* (rev. ed.) : 44, pl. 12, fig. 221 ; LOUWERENS, 1956, Verh. Naturf. Ges. Basel, 67 : 45 ; LOUWERENS, 1958, Treubia, 24 : 249 ; HABU, 1961, Nature and Life in Southeast Asia, 1 : 296 ; HABU, 1962, Bull. Natl. Inst. Agr. Sci., (C) no. 13 : 113–116, 126, figs. 4, 16, 25, 26 ; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2 : 49, pl. 25, fig. 9 ; UÉNO, 1964, Kontyû, 32 : 263 ; HABU, 1967, Faun. Jap., Carab., Truncatipen. : 31–33, figs. 60, 65, 73, 79, 80, pl. 10-fig. 2 ; HABU, 1975, Trans. Shikoku Ent. Soc., 12 : 77 ; HABU, 1975, Ent. Rev. Japan, 28 : 71, tab. 1 ; HABU, 1979, *do.,* 33 : 1.

Casnoidea indica THUNBERG : CSIKI, 1932, Col. Cat., pars 124 : 1534–1535 ; JEDLIČKA, 1963, Ent. Abh., 28 : 498, 499, pl. 5, fig. 38 ; DARLINGTON, 1968, Bull. Mus. Comp. Zool., 137 : 207, 208.

Drypta japonica BATES : HIRAYAMA, 1937, Genshoku Senshu Zoku Konchû Zufu : 144, pl. 67, fig. 3.

Supplemental description. WH/WF 1.77–1.88, mean 1.84 (♂), 1.72–1.80, mean 1.75 (♀), WP/WH 0.67–0.72, mean 0.70, LP/WP 1.88–2.07, mean 1.99, WP/WBP 1.18–1.21, mean 1.20, WBP/WAP 1.54–1.63, mean 1.60, WE/WP 2.19–2.38, mean 2.28, in five ♂♂ and five ♀♀.

Distribution. Japan : Honshu ; Shikoku ; Kyushu ; Satsunans ; Ryukyus. Formosa. China. Celebes. Indo-China. Malaya. Thailand. Burma. Ceylon. India. Nepal.

9. *Ophionea* (*Ophionea*) *nigrofasciata* SCHMIDT-GOEBEL

Ophionea nigrofasciata SCHMIDT-GOEBEL, 1846, Faun. Col. Birm. : 21 (Burma) ; BATES, 1892, Ann. Mus. Civ. Stor. Nat. Genova, (2) 12 (32) : 380 ; ANDREWES, 1921, Trans. Ent. Soc. Lond. : 161 ; ANDREWES, 1923, Trans. Ent. Soc. Lond. : 4 ; ANDREWES, 1929, Tijdschr. Ent., 72 : 310 ; ANDREWES, 1930, Treubia, 7 : 334 ; ANDREWES, 1931, Journ. F. Malay State Mus., 16 : 437 ; LIEBKE, 1938, Festschr. E. STRAND, 4 : 80, fig. 57 ; HABU, 1962, Bull. Natl. Inst. Agr. Sci.,

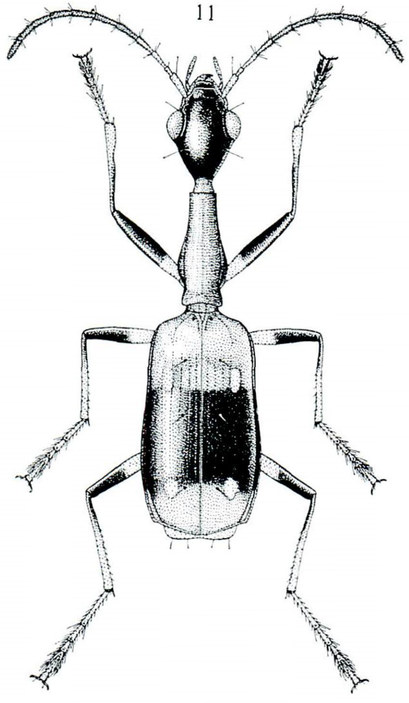


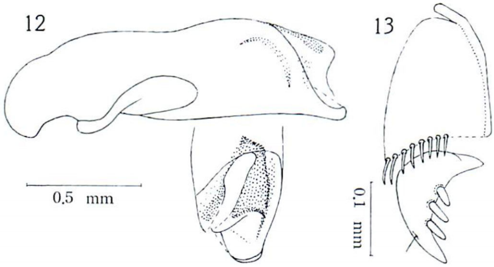
Fig. 11. *Ophionea* (*Ophionea*) *nigrofasciata* SCHMIDT-GOEBEL, ♀ from Indo-China.

(C) no. 13: 113, 116–118, 126, fig. 17; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 31, 33–35, pl. 10-fig. 3; LOUWERENS, 1967, Ent. Medd., 35: 201–202.

Ophionea nigro-fasciata SCHMIDT-GOEBEL: MAINDRON, 1910, Bull. Soc. Ent. France: 35.

Casnoidea nigrofasciata SCHMIDT-GOEBEL: DUPUIS, 1913, Ann. Soc. Ent. Belg., 57: 270; CSIKI, 1932, Col. Cat., pars 124: 1535; JEDLIČKA, 1963, Ent. Abh., 28: 498, 499–500, fig. 201; DARLINGTON, 1968, Bull. Mus. Comp. Zool., 137: 207, 208.

Supplemental description. WH/WF 1.75, 1.82, 1.85 (♂), 1.75 (♀), WP/WH 0.64–0.68, mean 0.66, LP/WP 2.26–2.30, mean 2.28, WP/WBP 1.16–1.21, mean 1.19, WBP/WAP 1.50–1.60, mean 1.53, WE/WP 2.32–2.45, mean 2.40, in three ♂♂ and one ♀ from W. Sumatra. Sternite 6 of ♂ rather shallowly emarginate at apex. Aedeagus (Fig .12) unusually stout, almost straight, a little twisted to right side, apex somewhat reflexed; apical lamella fully short and wide, widely truncate-rounded at apex. Apical segment of styluses (Fig. 13) with three stout spines on ventral outer margin.



Figs. 12, 13. *Ophionea* (*Ophionea*) *nigrofasciata* SCHMIDT-GOEBEL from W. Sumatra.
12. Male genitalia. 13. Stylus.

Distribution. ? Japan (after CSIKI, 1932). Hainan Is. Borneo. Java. Sumatra. Indo-China. Malaya. Thailand. Burma. Ceylon. India. ? New Guinea.

CSIKI's record of this species from Japan seems to be a mistake, for DARLINGTON (1968) states concerning "New Guinea" in CSIKI's Catalogue that "I suspect that a too-hasty compiler, not noticing the negative, picked 'New Guinea' out of ANDREWES' (1930 d) statement that 'I have seen no examples either from Japan or New Guinea' ", and Japan must be the same case. ANDREWES (1929 b) also states "··· found all through South East Asia, excluding Japan".

Subgenus *Setophionea* HABU

Type-species: *Ophionea ishiii* HABU from Ryukyus etc. (original designation).
Setophionea HABU, 1962, Bull. Natl. Inst. Agr. Sci., (C) no. 13: 113, 118.

10. *Ophionea* (*Setophionea*) *ishiii ishiii* HABU

"Ishii-kubinaga-gomimushi"

Ophionea (*Setophionea*) *ishiii ishiii* HABU, 1962, Bull. Natl. Inst. Agr. Sci., (C) no. 13: 113, 118–122, 126 figs. 18, 20, 23, 27 (Japan: Ryukyus; Formosa: Takesaki;

Java: Batavia); HABU, 1967, Faun. Jap., Carab., Truncatipen.: 31, 35–37, figs. 64, 81, 87, 90, pl. 1-fig. 2; HABU, 1975, Trans. Shikoku Ent. Soc., 12: 77; HABU, 1975, Ent. Rev. Japan, 28: 71, tab. 1.

Setophionea ishii [!] HABU: JEDLIČKA, 1963, Ent. Abh., 28: 501, fig. 243.

Supplemental description. WH/WF 1.75–1.83, mean 1.78 (♂), 1.70–1.81, mean 1.75 (♀), WP/WH 0.67–0.73, mean 0.70, LP/WP 1.82–1.93, mean 1.87, WP/WBP 1.17–1.23, mean 1.21, WBP/WAP 1.55–1.69, mean 1.61, WE/WP 2.23–2.33, mean 2.27 (♂), 2.30–2.37, mean 2.33 (♀), in five ♂♂ and five ♀♀.

Distribution. Japan: Ryukyus. Formosa. Java. Thailand.

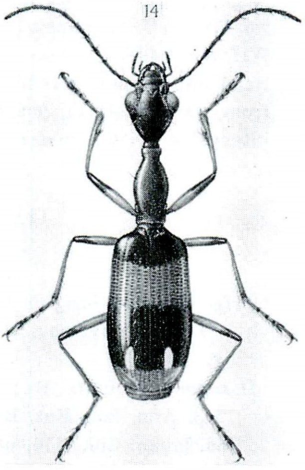


Fig. 14. *Ophionea* (*Setophionea*) *ishiii ishiii* HABU, ♀.

Tribe HEXAGONIINI

Type-genus: *Hexagonia* KIRBY.

Trigonodactylides LACORDAIRE, 1854, Gen. Col., 1: 69. Type-genus: *Trigonodactyla* DEJEAN (=*Hexagonia* KIRBY).

Hexagoniae HORN, 1882, Trans. Amer. Ent. Soc., 9: 146.

Supplemental characteristics. Female genitalia with hemisternites distinctly wide, setose at apical area; apical segment of styluses with bisetose subapical foramen.

Genus *Hexagonia* KIRBY

Type-species: *Hexagonia terminata* KIRBY from India (monotypic).

Hexagonia KIRBY, 1825, Trans. Linn. Soc. Lond., 14: 563–564.

Trigonodactyla DEJEAN, 1831, Spec. Gén. Col., 5: 278, 288–289. Type-species: *Odacantha cephalotes* DEJEAN from India (the first of the two species mentioned, designated by JEANNEL, 1948).

Key to species

1. Elytra not so long, fully less than twice as long as wide; dark brown, somewhat reddish, elytra almost black at apical area; pronotum and ventral side not punctate; basal border of elytra complete ·· 13. *H. sauteri*

— Elytra long and narrow, more than twice as long as wide; elytra yellowish or reddish brown to brownish yellow, with black apical or subapical patch; pronotum and ventral side with large punctures; basal border of elytra interrupted at base of interval 3 ·· 2

2. Head and pronotum dark reddish brown to reddish black, elytral black patch

large, generally reaching apex of elytra, reaching laterally stria 5 or 6; elytra weakly convex, intervals somewhat convex, interval 4 as wide as interval 3; WH/WF 1.49–1.59 ··········11. *H. insignis*

— Head and pronotum reddish brown, elytral black patch smaller, distinctly isolated from apex of elytra, not reaching stria 4 in general; elytra flat, intervals flat, interval 4 a little wider than interval 3; WH/WF 1.57–1.64 ··········12. *H. cyclops*

11. *Hexagonia insignis* (BATES)

"Kuromon-hiranaga-gomimushi"

Trigonodactyla insignis BATES, 1883, Trans. Ent. Soc. Lond.: 277–278, pl. 13, fig. 6 (Japan: Yuyama; Hitoyoshi); KAMIYA, 1938, Nippon no Kôchû, 2: 60, pl. 7, fig. 4.

Hexagonia insignis BATES: DUPUIS, 1913, Gen. Ins., fasc. 147, Col.: 3; DUPUIS[3], 1913, Ann. Soc. Ent. Belg., 57: 263; OHKURA and UÉNO, 1955, Coloured Illustr. Ins. Japan, Col.: 110, pl. 40, fig. 160; OHKURA and UÉNO, 1955, *do.* (rev. ed.): 45, pl. 12, fig. 230; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 49, pl. 25, fig. 3; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 39–41, figs. 6, 30, 91–95, pl. 2-fig. 1; HABU, 1975, Trans. Shikoku Ent. Soc., 12: 80; NAKANE, 1975, Gakken Chû-Kô-Sei Zukan, Ins. 2 (Col.): 260, pl. 44; HABU, 1978, Ent. Rev. Japan, 32: 37.

? *Cymindis pictula* BATES: HIRAYAMA, 1940, Genshoku Kôchû Zufu: 86, pl. 31, fig. 7.

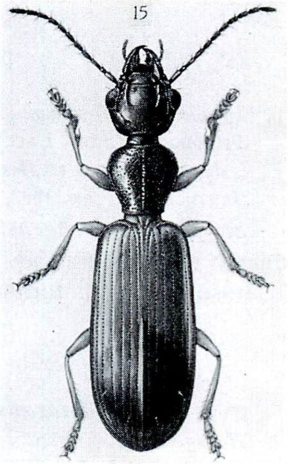


Fig. 15. *Hexagonia insignis* (BATES), ♂.

Supplemental description. WH/WF 1.49–1.59, mean 1.54, WP/WH 0.91–1.02, mean 0.96, WP/LP 1.00–1.16, mean 1.08, WP/WBP 1.60–1.70, mean 1.64, WE/WP 1.40–1.51, mean 1.46, in five ♂♂ and five ♀♀. Antennal segment 2 with some verticillate setae near apex; mentum tooth simple at apex. Setae on apical area of basal segment of styluses stout; apical segment of styluses with subapical foramen at about apical third.

Distribution. Japan: Honshu; Shikoku; Kyushu. ? Formosa. I do not know whether this species extends to Formosa or is replaced by the following species there.

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[3] There remains some doubt whether DUPUIS' species is *H. insignis* or *H. cyclops*.

12. *Hexagonia cyclops* (MATSUMURA)

"Hitotsume-hiranaga-gomimushi"

Calleida cyclops MATSUMURA, 1910, Die Schädlichen und Nützlichen Insekten vom Zuckerrohr Formosas: 48 (in Germ.), pl. 30, fig. 6 (Formosa: Ako); MATSUMURA, 1911, Mém. Soc. Ent. Belg., 18: 147.

Crossoglossa cyclops MATSUMURA, 1910, Die Schädlichen und Nützlichen Insekten vom Zuckerrohr Formosas: 82 (in Jap.).

Ophionea cyclops MATSUMURA: MIWA, 1931, Rep. Dep. Agr. Gov. Res. Inst. Formosa, no. 55: 15.

Callida cyclops MATSUMURA: TAKANO and YANAGIHARA, 1939, Spec. Rep. Gov. Formosa, Sugar Exp. Stat., no. 2: 188, pl. 9, fig. 7.

Hexagonia cyclops MATSUMURA: HABU, 1975, Trans. Shikoku Ent. Soc., 12: 78–80, figs. 17, 18, 19; HABU, 1975, Ent. Rev. Japan, 28: 71, tab. 1; HABU, 1978, Ent. Rev. Japan, 32: 37.

Supplemental description. WH/WF 1.57–1.64, mean 1.60, WP/WH 0.96–0.99, mean 0.97, WP/LP 1.05–1.12, mean 1.08, WP/WBP 1.60–1.71, mean 1.66, WE/WP 1.43–1.53, mean 1.47, in three ♂♂ and five ♀♀. Antennal segment 2, mentum tooth and female genitalia similar to those of *insignis*.

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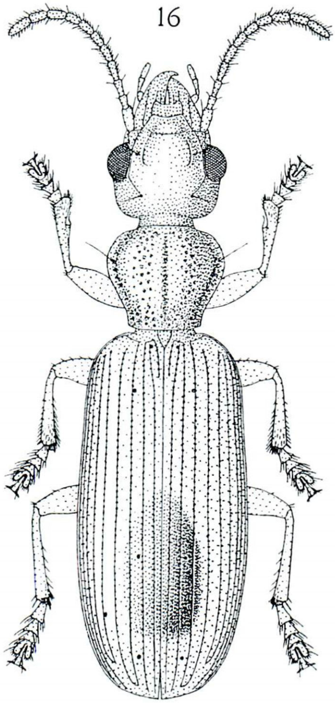

Fig. 16. *Hexagonia cyclops* (MATSUMURA), ♀.

Distribution. Japan: Ryukyus—Ishigaki Is. Formosa.

13. *Hexagonia sauteri* DUPUIS

"Chairo-hiranaga-gomimushi"

Hexagonia sauteri DUPUIS, 1912, Ann. Soc. Ent. Belg., 56: 308–312 (Formosa: "Kankan"); HABU, 1978, Ent. Rev. Japan, 32: 33–36, figs. 3, 5–8.

Hexagonia Sauteri DUPUIS: DUPUIS, 1913, Gen. Ins., fasc. 147, Col.: 3, pl.-figs. 1, 3–7.

Supplemental description. WH/WF 1.57, WP/WH 1.13, WP/LP 1.14, WP/WBP 1.74, WE/WP 1.50, in one ♀. Antennal segment 2 without verticillate setae at apex; mentum tooth narrowly emarginate at apex forming small blunt dents. Five or six setae on apical area of basal segment of styluses moderately long and thin, apical segment with subapical foramen opened fully more apically than in preceding two spp.

Distribution. Japan: Ryukyus—Iriomote Is. (K. TERADA leg.). Formosa.

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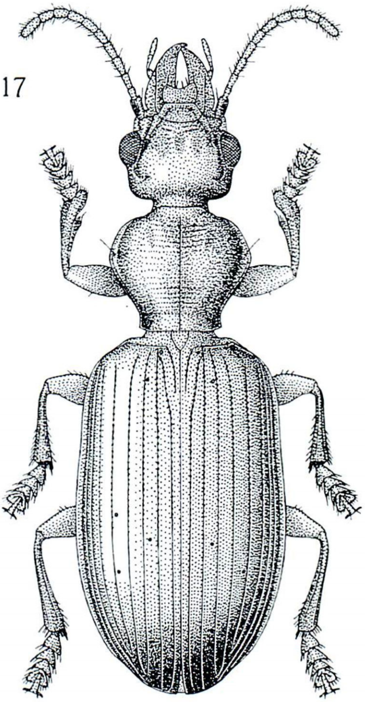

Fig. 17. *Hexagonia sauteri* DUPUIS, ♀.

Tribe PENTAGONICINI

Type-genus: *Pentagonica* SCHMIDT-GOEBEL.

Actenonycinae BATES, 1871, Ent. Month. Mag., 8: 30 (footnote). Nomen oblitum. Type-genus: *Actenonyx* WHITE.

Pentagonicinae BATES, 1873, Trans. Ent. Soc. Lond.: 320.

Scopodini CSIKI, 1932, Col. Cat., pars 124: 1500. Type-genus: *Scopodes* ERICKSON.

Supplemental characteristics. Hemisternites wide, setose at apical area; apical segment longer than wide, more or less bullet-shaped, without distinct spines, with a few short setae near apex on ventral side, subapical foramen absent.

Genus *Pentagonica* SCHMIDT-GOEBEL

Type-species: *Pentagonica ruficollis* SCHMIDT-GOEBEL from Burma (the first of the two species mentioned, designated by ANDREWES, 1939 a).

Pentagonica SCHMIDT-GOEBEL, 1846, Faun. Col. Birm.: 47–48.

Rhombodera REICHE, 1842, Rev. Zool., 5: 313 (nec BURMEISTER).

Didetus LECONTE, 1853, Trans. Amer. Philos. Soc., (2) 10: 377. Type-species: *Didetus flavipes* LECONTE from Louisiana, U.S.A. (monotypic).

Elliotia NIETNER, 1856, Journ. Asiat. Soc. Bengal, 25: 525; NIETNER, 1857, Ann. Mag. Nat. Hist., (2) 19: 375–376. Type-species: *Elliotia pallipes* NIETNER from Ceylon (monotypic).

Trichothorax MONTROUZIER, 1860, Ann. Soc. Ent. France, (3) 8: 235. Type-species: *Trichothorax cyaneus* MONTROUZIER from New Caledonia (monotypic).

Xenothorax WOLLASTON, 1867, Col. Hesperid.: 15. Type-species: *Xenothorax hexagonus* WOLLASTON from Senegal, W. Africa (monotypic).

Wakefieldia BROUN, 1880, Man. New Zeal. Col.: 62. Type-species: *Wakefieldia vittata* BROUN [=*Pentagonica vittipennis* CHAUDOIR] from New Zealand (monotypic).

Key to species

1. Elytra without microsculpture, so shiny, striae replaced by row of fine punctures; pronotum reddish orange; antennae densely pubescent from segment 4 ………… 18. *P. nigripennis*

— Elytra with microsculpture ………… 2

2. Pronotum without microsculpture, so polished, narrow, more than one and one-half times as wide as long; head round; elytral striae strongly punctate ………… 19. *P. subcordicollis*

— Pronotum with microsculpture and mat ………… 3

3. Elytra with striae faint, not punctate, inner apical angle generally with small tooth; antennae densely pubescent from segment 5; pronotum orange ………… 14. *P. daimiella*

— Elytra with striae more or less distinct, punctate, inner apical angle without tooth; antennae densely pubescent from segment 4 ………… 4

4. Elytral striae with fine punctures; antennae light reddish brown (segment 1 somewhat dark); pronotum dirty reddish brown or dark brown …… 17. *P. kyushuensis*

— Elytral striae with distinct punctures; antennae reddish brown to dark reddish brown ………… 5

5. Pronotum black or brownish black ………… 15. *P. angulosa*

— Pronotum reddish brown or orange ………… 16. *P. biangulata*

I) *ruficollis*-group

14. *Pentagonica daimiella* BATES

"Daimyô-tsubu-gomimushi"

Pentagonica ruficollis SCHMIDT-GOEBEL: BATES, 1873, Trans. Ent. Soc. Lond.: 320.

Pentagonica Daimiella BATES, 1892, Ann. Mus. Civ. Stor. Nat. Genova, (2) 12 (32): 426 (Japan: Nagasaki).

Pentagonica daimiella BATES: NAKANE and UÉNO, 1952, Shin-Konchû, 5 (8): fig. 21 in p. 48; OHKURA and UÉNO, 1955, Coloured Illustr. Ins. Japan, Col.: 110, pl. 40, fig. 159; OHKURA and UÉNO, 1955, *do.* (rev. ed.): 45, pl. 12, fig. 229; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 49, pl. 25, fig. 12; JEDLIČKA 1963, Ent. Abh., 28: 506, 509, pl. 5, fig. 42; SHIBATA, 1963, Ent. Rev. Japan,

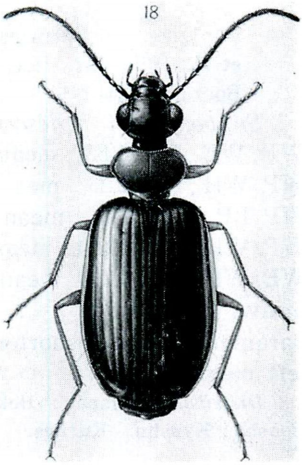

Fig. 18. *Pentagonica daimiella* BATES, ♂.

16: 18; UÉNO, 1964, Kontyû, 32: 262; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 43–45, figs. 7, 32, 97, 106, 108, 112, pl. 1-fig. 3; NAKANE, 1975, Gakken Chû-Kô-Sei Zukan, Ins. 2 (Col.): 302, pl. 44.

Supplemental description. WH/WF 1.67–1.75, mean 1.71, WP/WH 1.14–1.24, mean 1.20, WP/LP 1.60–1.73, mean 1.68, WP/WBP 1.91–2.03, mean 1.95, WE/WP 1.65–1.79, mean 1.74, in five ♂♂ and five ♀♀. Right paramere a little shorter than left paramere.

Distribution. Japan: ? Hokkaido (after MATSUMURA, 1895); Honshu; Shikoku; Kyushu; Satsunans; Ryukyus. E. Siberia (after JEDLIČKA, 1952). Formosa (after JEDLIČKA, 1953). China (after JEDLIČKA, 1953).

II) *angulosa*-group

15. *Pentagonica angulosa* BATES

"Kado-tsubu-gomimushi"

Pentagonica angulosa BATES, 1883, Trans. Ent. Soc. Lond.: 286 (Japan: "Yuyama; Kashiwagi; Nikko"); NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 49, pl. 25, fig. 11; JEDLIČKA, 1963, Ent. Abh., 28: 505, 506–507; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 43, 45–46, figs. 101, 105, 111, 114, pl. 11-fig. 1; КРЫЖАНОВСКИЙ et al., 1975, Энт. Иссл. Дал. Вост., 3: 125, 141.

Supplemental description. WH/WF 1.71–1.85, mean 1.77, WP/WH 1.18–1.23, mean 1.21, WP/LP 1.68–1.78, mean 1.75, WP/WBP 1.92–2.04, mean 1.98, WE/WP 1.68–1.78, mean 1.73, in five ♂♂ and five ♀♀. Right paramere a little shorter than left paramere.

Distribution. Japan: Hokkaido; Honshu; Kyushu. Kuriles.

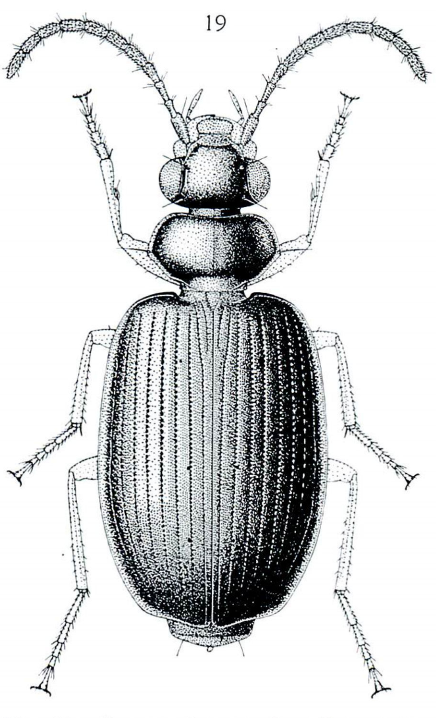

Fig. 19. *Pentagonica angulosa* BATES, ♂.

16. *Pentagonica biangulata* DUPUIS

"Higekuro-tsubu-gomimushi"

Pentagonica biangulata DUPUIS, 1912, Ann. Soc. Ent. Belg., 56: 312–314 (Formosa: "Kosempo"); DUPUIS, 1913, Gen. Ins., fasc. 145, Col.: pl. 1, fig. 1; JEDLIČKA, 1963, Ent. Abh., 28: 505, 506, fig. 204; SHIBATA, 1963, Ent. Rev. Japan, 16: 18; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 43, 46–47, figs. 96, 103, 110, pl. 11-fig. 2; HABU, 1975, Trans. Shikoku Ent. Soc., 12: 80.

Supplemental description. WH/WF 1.78–1.99, mean 1.85, in five ♂♂, WP/WH 1.14–1.20, mean 1.17, WP/LP 1.72–1.88, mean 1.81, WP/WBP 1.77–2.02, mean 1.93, in four ♂♂[4], WE/WP 1.62, 1.67, 1.71 in three ♂♂. Right paramere a little shorter than left paramere.

Distribution. Japan: Satsunans—Amami-ôshima Is.; Ryukyus. Formosa (I examined 1 ♂, Jihyue-tan, Y. MIYAKE leg.).

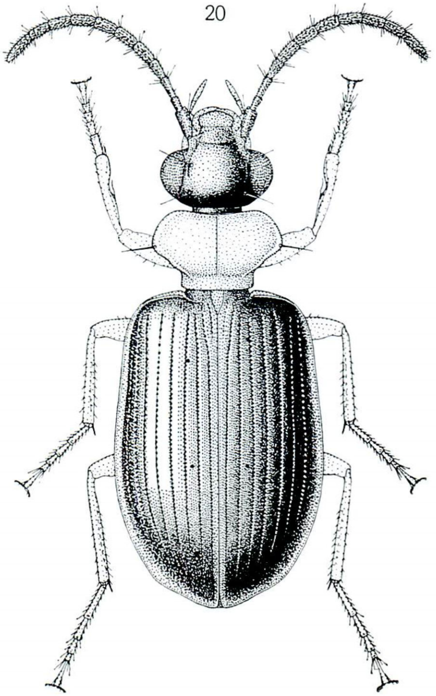

Fig. 20. *Pentagonica biangulata* DUPUIS, ♂.

17. *Pentagonica kyushuensis* HABU

"Hime-tsubu-gomimushi"

Pentagonica kyushuensis HABU, 1967, Faun. Jap., Carab., Truncatipen.: 43, 48–50, figs. 98, 109, pl. 1-fig. 4 (Japan: Ohata-ike, Miyazaki Pref.); SHIBATA, 1969, Ent. Rev. Japan, 22: 54; HABU, 1978, Ent. Rev. Japan, 32: 37, fig. 9.

Supplemental description. WH/WF 1.85 in one ♀, WP/WH 1.23, 1.23, WP/LP 1.89, 1.83, WE/WP 1.72, 1.74 in one ♂ and one ♀ respectively. Right paramere a little shorter than left paramere. Female genitalia in HABU (1978 a).

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[4] One other male specimen is with a fully narrower pronotum, WP/WH 1.06, WP/LP 1.63, WP/WBP 1.77, WE/WP 1.76.

Distribution. Japan: Kyushu—Ohata-ike, Miyazaki Pref.; Ryukyus—Ishigaki Is., and Iriomote Is. (K. Terada leg.).

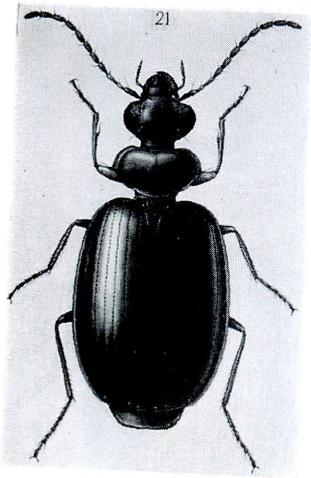

Fig. 21. *Pentagonica kyushuensis* Habu, ♂.

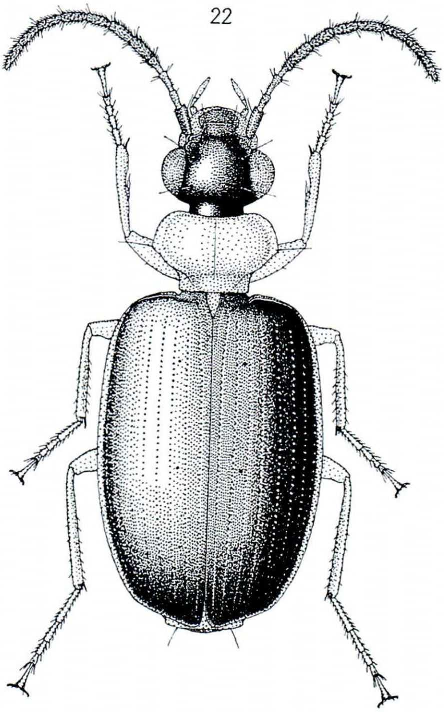

Fig. 22. *Pentagonica nigripennis* Bates, ♂.

18. *Pentagonica nigripennis* Bates

“Haneguro-tsubu-gomimushi”

Pentagonica nigripennis Bates, 1873, Trans. Ent. Soc. Lond.: 320–321 (Japan: Nagasaki); Jedlička, 1963, Ent. Abh., 28: 506, 509; Shibata, 1963, Ent. Rev. Japan, 16: 18; Habu, 1967, Faun. Jap., Carab., Truncatipen.: 43, 50–51, figs. 100, 102, pl. 11-fig. 3.

Distribution. Japan: Kyushu—Nagasaki, Nagasaki Pref. (G. Lewis leg.); Satsunans—Amami-ôshima Is.

19. *Pentagonica subcordicollis* Bates

“Kuro-tsubu-gomimushi”

Pentagonica subcordicollis Bates, 1873, Trans. Ent. Soc. Lond.: 321 (Japan: Nagasaki); SHIBATA, 1961, Ent. Rev. Japan, 13: 62; JEDLIČKA, 1963, Ent. Abh., 28: 506, 510; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 43, 51-53, figs. 99, 104, 113, pl. 11-fig. 4.

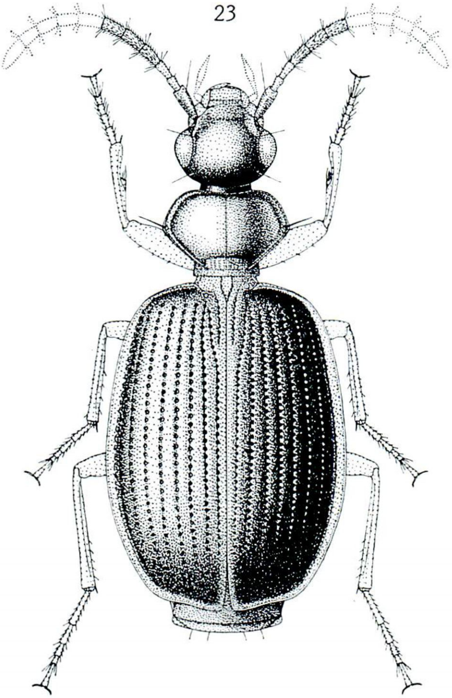

Fig. 23. *Pentagonica subcordicollis* BATES, ♀.

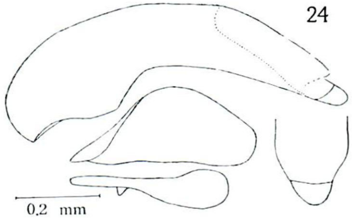

Fig. 24. Male genitalia of *Pentagonica subcordicollis* BATES.

Supplemental description. WH/WF 1.73, 1.69, WP/WH 1.23, 1.17, WP/LP 1.56, 1.51, WP/WBP 2.01, 1.98, WE/WP 1.77, 1.85 in one ♂ from Japan and one ♂ from Formosa respectively.

Aedeagus (Fig. 24) moderately curved, a little twisted to left side; apical lamella wider than usual, nearly twice as wide as long, somewhat asymmetric, right margin a little shorter but a little more rounded than left margin, apex widely rounded; parameres rather wide, right paramere fully shorter than left paramere.

Distribution. Japan: Honshu—Sasabe, Osaka Pref., Mt. Iwawaki, Osaka Pref.; Shikoku—Okinoshima Is., Kôchi Pref.; Kyushu—Nagasaki, Nagasaki Pref.; Satsunans—Ambô, Yakushima Is. and Hatsuno, Amami-ôshima Is. Formosa: Kukuan (K. TERADA leg.).

Tribe MASOREINI[5]

Type-genus: *Masoreus* DEJEAN.

Pseudo-féronides LACORDAIRE, 1854, Gen. Col., 1: 306-307. Invalid name without type-genus.

Masoreinae BATES, 1873, Trans. Ent. Soc. Lond.: 307.

Tetragonodérides CHAUDOIR, 1876, Bull. Soc. Nat. Mosc., 51 (2): 28, 54. Type-genus: *Tetragonoderus* Dejean.

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[5] Quite recently the historical review of this tribe is detailed by BALL (1979).

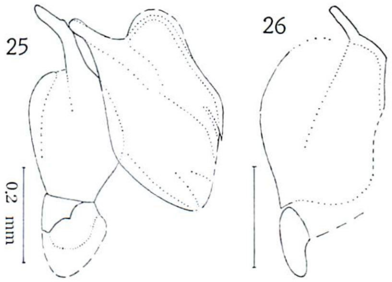
Aephnidiina Jakobson, 1907, Col. Russ., pars 5: 390. Type-genus: *Aephnidius* MacLeay.

Corsyrina Jakobson, 1907, *do.*: 392. Type-genus: *Corsyra* Dejean.

Anaulacini Csiki, 1932, Col. Cat., pars 124: 1287. Type-genus: *Anaulacus* MacLeay.

Cyclosomini Csiki, 1932, Col. Cat., pars 124: 1294. Type-genus: *Cyclosomus* Latreille.

Supplemental characteristics. Hemisternites (Fig. 25) glabrous; styluses (Figs. 25, 26) completely glabrous, basal segment wide, apical segment variable in form, without subapical foramen nor spines.



Figs. 25, 26. Styluses in foreign Masoreini.
25. *Tetragonoderus quadrisignatus* (Quensel) from India. 26. *Corsyra fusula* Fischer-Waldheim from Manchuria, N. China.

Genus *Aephnidius* MacLeay

Type-species: *Anaulacus adelioides* MacLeay from Java (monotypic).

Aephnidius MacLeay, 1825, Ann. Jav.: 23. (subgenus of *Anaulacus*).

Supplemental description. Hemisternites relatively small; apical segment of styluses fully longer than wide, apical area not transparent (widely transparent in *Tetragonoderus* (Fig. 25)).

20. *Aephnidius adelioides* (MacLeay)

"Toge-atokiri-gomimushi"

Anaulacus (*Aephnidius*) *adelioides* MacLeay, 1825, Ann. Jav.: 23, pl. 1, fig. 7 (Java).

Masoreus sericeus Zimmermann, 1832, in Gistel, Faunus, 1: 121 (India); Motschulsky, 1864, Bull. Soc. Nat. Mosc., 37 (2): 234; Chaudoir, 1876, Bull. Soc. Nat. Mosc., 51 (2): 17.

Aephnidius adelioides MacLeay: Schmidt-Goebel, 1846, Faun. Col. Birm.: 88–89; Bates, 1889, Ann. Soc. Ent. France, (6) 9: 282; Andrewes, 1919, Trans. Ent. Soc. Lond.: 159; Andrewes, 1923, Trans. Ent. Soc. Lond.: 51; Andrewes, 1924, Ann. Mag. Nat. Hist., (9) 13: 470; Andrewes, 1924, Miss. Ind. Babault, Carab.: 60; Andrewes, 1927, Ann. Mag. Nat. Hist., (9) 19: 99; Andrewes, 1930, Trans. Ent. Soc. Lond., 78: 9; Andrewes, 1932, Carab. Résul. Sci. Voy. Ind. Orient. Néerl., 4 (4), Col., 1: 10; Andrewes, 1947, Ark. Zool., 38 A (20): 12; Landin, 1955, Ark. Zool., (N. S.) 8: 404, 457; Nakane, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 49, pl. 25 fig. 10; Habu, 1967, Faun. Jap., Carab., Truncatipen.: 55–57, figs. 8, 33, 115–117, pl. 10-fig. 4; Darlington, 1968, Bull. Mus. Comp. Zool., 137: 78; Habu, 1975 Ent. Rev. Japan, 28: 71, tab. 1; Nakane, 1975, Gakken Chû-Kô-Sei Zukan, Ins. 2 (Col.): 322, pl. 44.

Masoreus adelioides MacLeay: Schaum, 1863, Berl. Ent. Zeitschr.: 78; Chaudoir, 1876, Bull. Soc. Nat. Mosc., 51 (2): 17; Bates, 1873, Trans. Ent. Soc. Lond.: 307.

Masoreus adeloides MacLeay: Gemminger and Harold, 1868, Cat. Col., 1: 145. Unjustified emendation.

Masoreus (*Aephnidius*) *adelioides* MacLeay: Bates, 1889, Ann. Mus. Civ. Stor. Nat. Genova, (2) 7 (27): 110; Bates, 1892, *do.*, (2) 12 (32): 404.

Masoreus australis Sloane, 1904, Proc. Linn. Soc. N. S. Wales, 29: 535–536 (Australia).

27

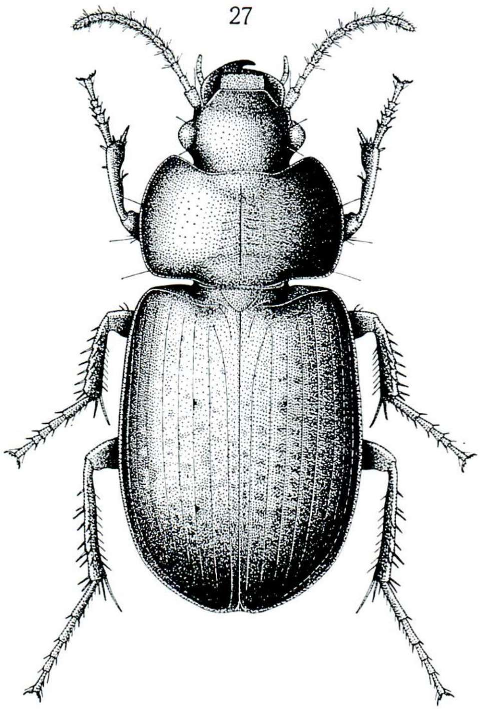


Fig. 27. *Aephnidius adelioides* (MacLeay), ♀.

Aephnidius adel(i)oides MacLeay: Jakobson, 1907, Col. Russ., pars 5: 391.

Aephnidius adeloides MacLeay: Sloane, 1907, Deutsch. Ent. Zeitschr.: 472; Sloane, 1920, Proc. Linn. Soc. N. S. Wales, 45: 322; Jedlička, 1963, Ent. Abh., 28: 284, 285–286.

Supplemental description. WH/WF 1.35–1.40, mean 1.37, WP/WH 1.54–1.64, mean 1.60, WP/LP 1.69–1.75, mean 1.73, WP/WBP(s) 1.07–1.13, mean 1.11, WBP(s)/WAP 1.32–1.43, mean 1.37, WE/WP 1.14–1.21, mean 1.17, in five ♂♂ and five ♀♀.

Distribution. Japan: Honshu; Kyushu; Satsunans; Ryukyus. Formosa. Philippines. New Guinea. Bismarcks. Australia. Celebes. Java. Sumatra. S. China. Indo-China. Burma. India.

Tribe LEBIINI

Type-genus *Lebia* Latreille.

Lebiotae Bonelli, 1810, Obs. Ent. 1, tab. syn.

Supplemental characteristics. Female genitalia (except in *Celaenephes*) with hemisternites glabrous; basal segment of styluses glabrous, apical segment without subapical foramen (with a few exceptions (Figs. 31–33)).

Notes on subtribes. I classified the genera of Japan into eight subtribes in the Fauna Japonica, but I establish hereafter newly Celaenephina for *Celaenephes,* which I put hesitatingly in the end of the Dromiina in 1967, though I have still some doubts whether this genus is truly a member of the Lebiini or not. The genera of Japan is arranged here as follows :—

A. Celaenephina ···*Celaenephes.*
B. Cymindina ······*Cymindis, Somotrichus.*
C. Catascopina······*Catascopus.*
D. Pericalina
  Pericalus-group·········*Coptodera, Lioptera.*
  Dolichoctis-group ······*Dolichoctis* (including *Mochtherus*), *Pseudomenarus, Brachichila, Amphimenes.*
E. Anomotarina ···*Anomotarus.*
F. Calleidina
  Calleida-group ·········*Calleida, Endynomena, Anchista, Orionella, Lachnoderma, Taicona.*
  Lebidia-group ·········*Lebidia.*
  Parena-group············*Parena* (including *Bothynoptera*).
G. Lebiina ············*Lebia, Setolebia, Lachnolebia.*
H. Demetriina ······*Demetrias, Peliocypas.*
I. Dromiina
  Dromius-group·········*Dromius, Philorhizus.*
  Microlestes-group······*Microlestes, Syntomus, Apristus.*

Key to subtribes

1. Tarsi of dilated form ·· 2
— Tarsi not of dilated form ·· 4
2. Mandibles more or less widened near base, scrobe wide, outer margin rounded; apical segment of styluses variable in shape, with pubescence or secondary spines ·· F. Calleidina
— Mandibles not widened near base, outer margin not well rounded····················3
3. Tarsal segment 4 generally bilobed, but lobes not fully long; apical segment of styluses more or less semicircular, glabrous ··································· G. Lebiina
— Tarsal segment 4 distinctly bilobed, lobes fully long and wide; apical segment of styluses elongate, glabrous ··· H. Demetriina
4. Tarsi of stout form ·· 5
— Tarsi of slender form ·· 7
5. Mandibles widened near base, scrobe wide; apical segment of styluses elongate, pubescent near apex ·· E. Anomotarina
— Mandibles not widened near base, scrobe narrow ···6

6. Mandibles moderately long; claws dentate; apical segment of styluses almost parallel at basal half, with some spines ······ B. Cymindina
— Mandibles fully long; claws smooth or denticulate; apical segment of styluses well sinuate at outer side, wide at basal part, narrow at apical half, with some spines ······ C. Catascopina
7. Mandibles rather slender, not or gently curved; apical segment of styluses sinuate on outer side, more or less tapering apically, with some spines ······ D. Pericalina
— Mandibles rather short, well rounded near apex ······ 8
8. Styluses with basal segment glabrous, apical segment without bisetose subapical foramen, without spines though sometimes with secondary setae ······ I. Dromiina
— Styluses with basal segment distinctly setose at apical area, apical segment with bisetose subapical foramen (two setae fully long), with one spine on dorsal side, with two or three spines on ventral outer margin ······ A. Celaenephina, nov.

Key to genera

1. Claws denticulate or pectinate ······ 2
— Claws smooth ······ 29
2. Elytral striae evanescent and invisible; body glabrous, generally yellowish to reddish brown; pronotum without anterior marginal setae; tarsi of dilated form ······ *Lebidia*
— Elytral striae generally distinct, sometimes faint ······ 3
3. Dorsal side densely pubescent, pubescence long and distinct (in our spp.) ······ 4
— Dorsal side glabrous or almost glabrous (sometimes sparsely pubescent in part, or pubescence dense but not well visible in low magnification) ······ 9
4. Tarsi of stout form; scrobe of mandibles not wide ······ 5
— Tarsi of dilated form ······ 6
5. Pronotum with two pairs (rarely one pair) of marginal setae, not distinctly pedunculate at base; mentum with distinct epilobes ······ *Cymindis*
— Pronotum with some additional setae besides two pairs of marginal setae, distinctly pedunculate at base; mentum without distinct epilobes ······ *Somotrichus*
6. Apical segment of labial palpi securiform; mentum with at least one pair of long setae, median tooth bifid; pronotum pedunculate at base ······ *Lachnoderma*
— Apical segment of labial palpi not distinctly securiform; mentum tooth simple ······ 7
7. Pronotum well pedunculate at base; mentum without setae; paraglossae pubescent ······ *Lachnolebia*
— Pronotum not or a little pedunculate at base; mentum with one pair of setae; paraglossae glabrous ······ 8
8. Tempora tumid behind eyes; elytra with striae shallow or faint, interval 7 with series of pores; aedeagus densely pubescent along basal and lateral margins of delimited apical orifice ······ *Endynomena*
— Tempora not tumid; elytra with striae moderately impressed, distinct, interval 7 without series of pores; aedeagus glabrous, apical orifice not defined ······ *Orionella*
9. Elytral intervals transversely striate; mentum with triangular median tooth,

with two setae; ligula narrow, with four setae at apex, paraglossae a little extending beyond ligula ······ *Amphimenes*
— Elytral intervals not transversely striate ······ 10
10. Elytral interval 5 with at least one dorsal pore ······ 11
— Elytral interval 5 without dorsal pore ······ 14
11. Tarsi of slender form; elytral interval 7 with some pores; basal pore of elytra absent ······ *Dromius* (partim)
— Tarsi of dilated form; elytra with basal pore ······ 12
12. Pronotum almost as long as wide, posterior marginal setae sometimes absent ······ *Demetrias* (partim)
— Pronotum distinctly transverse, posterior marginal setae present ······ 13
13. Pronotum without anterior marginal setae; interval 5 of elytra with some pores ······ *Taicona*
— Pronotum with anterior and posterior marginal setae; interval 5 of elytra with only one pore near shoulder ······ *Anchista*
14. Tarsi of dilated form ······ 15
— Tarsi not of dilated form ······ 20
15. Pronotum fully transverse, well pedunculate at base; scrobe of mandibles not wide; mentum with distinct rounded tooth; ligula bisetose, paraglossae pubescent ······ 16
— Pronotum not or faintly pedunculate at base ······ 17
16. Elytral interval 3 with two pores; apical three pores of marginal series on elytral interval 9 situated triangularly; mentum without epilobes ······ *Lebia*
— Elytral interval 3 with more than three pores; apical three pores of marginal series on elytral interval 9 situated linearly; mentum with epilobes ······ *Setolebia*
17. Mentum without median tooth; paraglossae well pubescent; mandibles with very wide scrobe ······ *Parena*
— Mentum with distinct median tooth; paraglossae glabrous ······ 18
18. Apical segment of labial palpi more or less dilated or tumid; paraglossae not extending forward ······ *Calleida*
— Apical segment of labial palpi fusiform; paraglossae extending beyond ligula ······ 19
19. Antennal segments 1 to 3 sparsely pubescent; posterior supraorbital setae fairly distant from eyes; pronotum not pedunculate at base, basal angles not distinct ······ *Demetrias* (partim)
— Antennal segments 1 to 3 glabrous; posterior supraorbital setae close to eyes; pronotum pedunculate at base, basal angles distinct, more or less protrudent laterally ······ *Peliocypas*
20. Elytral interval 7 with some pores, basal pore absent; ligula rather wide, pubescent at apex, paraglossae obtuse-rounded at outer apical angle ······ *Dromius* (partim)
— Elytral interval 7 without dorsal pore, basal pore present ······ 21
21. Mandibles with wide scrobe; mentum with distinct median tooth; apical segment of labial palpi often securiform in ♂; tarsi of stout form ······ *Anomotarus*
— Mandibles with narrow scrobe; tarsi of slender form ······ 22

22. Elytral interval 3 without dorsal pore; pronotum not pedunculate at base; mentum without distinct tooth ·· *Philorhizus*

— Elytral interval 3 with some dorsal pores ·· 23

23. Pronotum not widely explanate-reflexed but finely bordered at lateral margins, base oblique-sinuate at lateral areas, pedunculate at median area; body small, generally black ·· 24

— Pronotum widely explanate-reflexed at lateral margins, base not or slightly pedunculate; basal border of elytra complete ·· 25

24. Mentum with median tooth ·· *Syntomus*

— Mentum without median tooth ·· *Microlestes*

25. At least elytra punctate; elytra with yellowish or reddish patches ··············· 26

— Dorsal side not punctate ·· 27

26. Elytral striae faint, composed of small punctures; body large ··········· *Lioptera*

— Elytral striae deep; body small ·· *Pseudomenarus*

27. Pronotum distinctly transverse, at least one and seven-tenths times as wide as long; paraglossae well projecting forward, setose at lateral margin; palpiger of labial palpi with one distinct seta ·· *Coptodera*

— Pronotum less transverse, at most one and two-thirds times as wide as long; paraglossae not setose on lateral margin; palpiger of labial palpi without seta ·· 28

28. Labrum distinctly transverse, six setae inserted in straight line; paraglossae fully extending beyond ligula ·· *Brachichila*

— Labrum almost as long as wide, two outer setae fairly behind level of four inner setae; paraglossae not extending beyond ligula ····················· *Dolichoctis*

29. Mandibles and labrum long, labrum emarginate at apex; body with fair metallic lustre ·· *Catascopus*

— Mandibles and labrum not so long, labrum not emarginate at apex ·············· 30

30. Ligula fully wide; pronotum cordate, not bordered at apex nor base ··· *Apristus*

— Ligula narrow; pronotum transverse, bordered at apex and base, apical angles pubescent ·· *Celaenephes*

A. Subtribe *CELAENEPHINA*, nov.

Type-genus: *Celaenephes* Schmidt-Goebel.

Characteristics. Mandibles not widened, not well curved near base, scrobe narrow; ventral side of head without seta on level of hind margin of eyes. Tarsi of slender form, without brush-like dense hairs on ventral side, segment 4 not bilobed; claws smooth. Hemisternites moderately wide, with some distinct setae at apical area; styluses (Fig. 28) rather narrow, basal segment with several long setae at apical area, apical segment fully longer than wide, but not slender, not acuminate at apex, with one spine on dorsal side, two or three moderately long spines on ventral outer margin, without secondary setae, subapical foramen distinct, with two fully long, closely inserted, distinct setae.

Remarks. *Celaenephes* seemingly resembles *Apristus* of the Dromiina, but the female genitalia have some developed characteristics contrary to those of other subtribes. The direction of evolution in the styluses is diagrammed in Fig. 29. They are more or less reduced or simplified and exceed the second degree, AB, AC, BC, in other Lebiini than *Celaenephes* so far as I have examined.

28

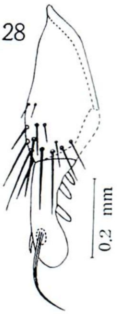


Fig. 28. Stylus of *Celaenephes parallelus* SCHMIDT-GOEBEL.

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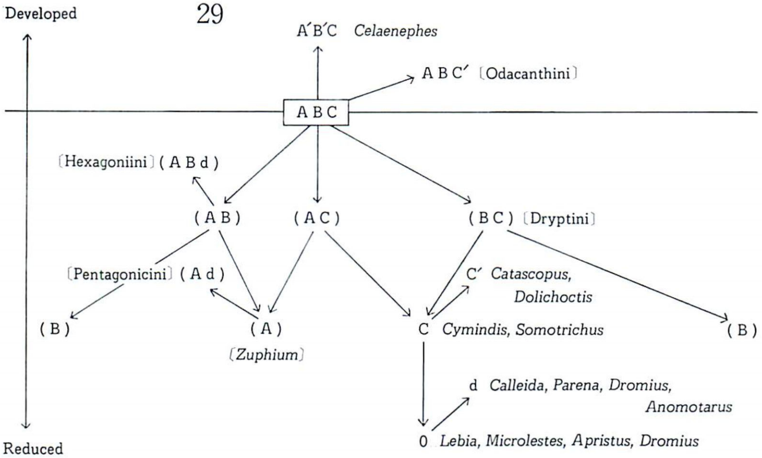

Fig. 29. Diagram of evolution in styluses in Lebiini.
A, B, C, d mean following characteristics — A: setae present at apical area of basal segment. B: subapical foramen present on apical segment. C: primary spines present on apical segment. d: secondary spines or setae present on apical segment. A′, B′, C′: setae or spines more developed than in A, B, C. 0: A, B, C all absent. ( ) signify no example in Lebiini. [ ] indicate examples other than Lebiini.

Genus *Celaenephes* SCHMIDT-GOEBEL

Type-species: *Celaenephes parallelus* SCHMIDT-GOEBEL from Burma (monotypic).

Celaenephes SCHMIDT-GOEBEL, 1846, Faun. Col. Birm.: 77–78.

Taromorpha BLACKBURN, 1894, Proc. Linn. Soc. N. S. Wales, (2) 9: 85. Type-species: *Taromorpha alternata* BLACKBURN [=*Celaenephes parallelus* SCHMIDT-GOEBEL] from N. Queensland, Australia (monotypic).

Fukuchina HABU, 1960, Esakia, no. 2: 4–5. Type-species: *Fukuchina sanadai*

Habu [=*Celaenephes parallelus* Schmidt-Goebel] from Japan (monotypic and original designation).

Supplemental description. Mid tarsi of ♂ without adhesive hairs ventrally.

21. *Celaenephes parallelus* Schmidt-Goebel

"Kuro-naga-atokiri-gomimushi"

Celaenephes parallelus Schmidt-Goebel, 1846, Faun. Col. Birm.: 78–79, pl. 2, fig. 5 (Burma); Motschulsky, 1861, Bull. Soc. Nat. Mosc., 34 (1): 104; Bates, 1886, Ann. Mag. Nat. Hist., (5) 17: 211; Bates, 1889, Ann. Soc. Ent. France, (6) 9: 286; Bates, 1892, Ann. Mus. Civ. Stor. Nat. Genova, (2) 12 (32): 420; Andrewes, 1919, Trans. Ent. Soc. Lond.: 188; Sloane, 1920, Proc. Linn. Soc. N. S. Wales, 45: 322; Andrewes, 1923, Trans. Ent. Soc. Lond.: 46; Andrewes, 1927, Ann. Mag. Nat. Hist., (9) 20: 272; Andrewes, 1927, Ins. Samoa, part 4, fasc. 1: 11; Andrewes, 1929, Tijdschr. Ent., 72; 314; Andrewes, 1947, Ark. Zool., 38 A (20): 12; Landin, 1955, Ark. Zool., (N. S.) 8: 403, 405, 466; Louwerens, 1956, Verh. Naturf. Ges. Basel, 67: 47; Shibata, 1962, Ent. Rev. Japan, 14: 66; Shibata, 1962, *do.*, 15: 18; Jedlička, 1963, Ent. Abh., 28: 399–400, fig. 129; Louwerens, 1964, Ent. Tidskr., 85: 181; Shibata, 1964, Ent. Rev. Japan, 17: 43, pl. 2, fig. 7; Habu, 1967, Faun. Jap., Carab., Truncatipen.: 250–253, figs. 26, 50, 133, 421–429, pl. 24-fig. 4; Louwerens, 1967, Ent. Medd., 35: 210; Darlington, 1968, Bull. Mus. Comp. Zool., 137: 135; Louwerens, 1969, Ent. Medd., 37: 365–366; Darlington, 1970, Ins. Micronesia, 15 (1): 43, fig. 7 c; Louwerens, 1970, Nat. Hist. Rennel Isl., Br. Solomon Isls., 6: 90.

Leistus ? *linearis* Walker, 1858, Ann. Mag. Nat. Hist., (3) 2: 203 (Ceylon).

Taromorpha alternata Blackburn, 1894, Proc. Linn. Soc. N. S. Wales, (2) 9: 85 (Australia: N. Queensland).

Celoenephes [!] *parallelus* Schmidt-Goebel: Bouchard, 1903, Ann. Soc. Ent. France, 72: 176.

Coloenephes [!] *Försteri* Bouchard,

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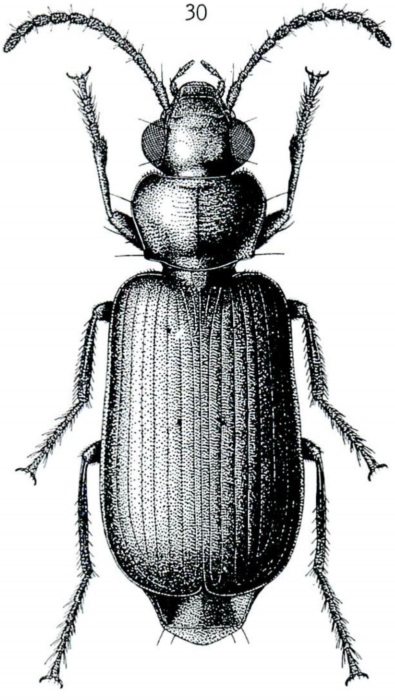

Fig. 30. *Celaenephes parallelus* Schmidt-Goebel, ♀.

1903, Ann. Soc. Ent. France, 72: 176 (Sumatra).

Celaenephes Rechingeri CSIKI, 1915, Denkschr. Akad. Wiss. Wien, 91: 164 (Samoa Is.).

Calaenephes [!] *parallelus* SCHMIDT-GOEBEL: ANDREWES, 1930, Treubia, 7, suppl.: 337.

Caelenephes [!] *parallelus* SCHMIDT-GOEBEL: LOUWERENS, 1956, Treubia, 23: 225.

Fukuchina sanadai HABU, 1960, Esakia, no. 2: 5-6, figs. 1, 2 (Japan: Mt. Fukuchi); JEDLIČKA, 1963, Ent. Abh., 28: 430, 431, fig. 239.

Supplemental description. WH/WF 1.68-1.81, mean 1.73, WP/WH 1.10-1.19, mean 1.14, WP/LP 1.29-1.42, mean 1.34, WP/WBP 1.21-1.26, mean 1.24, WBP/WAP 1.10-1.21, mean 1.16, WE/WP 1.53-1.63, mean 1.60, in one ♂ and four ♀♀[6]. Hind tarsi a little shorter to a little longer than head width, segment 1 one and one-fifth to less than one and one-third times as long as segment 2, segment 5 generally longer than segment 1, proportion 0.95-1.12.

Distribution. Japan: Kyushu—Mt. Fukuchi, Fukuoka Pref. (K. SANADA leg.); Satsunans—Amami-ôshima Is.; Ryukyus—Ishigaki Is. and Iriomote Is. Philippines. Moluccas. Micronesia. New Guinea. Australia. New Caledonia. Polynesia. Borneo. Malaya. Indo-China. Thailand. Burma. Ceylon. India.

B. Subtribe *CYMINDINA*

Type-genus: *Cymindis* LATREILLE.

Cymindides, Cymindidae, LAPORTE, 1835, Étud. Ent., 1: 46 (partim).

Supplemental characteristics. Ventral side of head with or without one pair of setae on level of hind margin of eyes. Hemisternites moderately wide; apical segment of styluses almost parallel at basal half, more or less narrowed towards apex at apical half, with one or two spines on dorsal and ventral outer margins, without secondary setae.

Genus *Cymindis* LATREILLE

Type-species: *Buprestis humeralis* FOURCROY from Europe (designated by LATREILLE, 1806).

Cymindis LATREILLE, 1806, Gen. Crust. Ins., 1: 190.

Tarus[7] CLAIRVILLE, 1806, Ent. Helv., 2: 94-95. Type-species: *Buprestis humeralis*

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[6] WH/WF 1.72, 1.72, WP/WH 1.11, 1.13, WP/LP 1.31, 1.35, WP/WBP 1.24, 1.28, WBP/WAP 1.09, 1.15, WE/WP 1.61, 1.59, in two ♀♀ from Malaya.

[7] The synonym is attributed to ANDREWES (1930 c). According to CSIKI (1932) the following genera are included into *Cymindis* as junior synonyms: *Arrhostus* MOTSCHULSKY (type-species: *Cymindis pictus* PALL, monotypic and original designation), *Berus* MOTSCHULSKY (type-species: *Cymindis faldermanni* GISTL, monotypic and original designation), *Mastus* MOTSCHULSKY (type-species: *Cymindis rufipes* GEBLER, monotypic and original designation), *Tarsostinus* MOTSCHULSKY (type-species: *Cymindis lateralis* FISCHER-WALDHEIM, monotypic and original designation), Bull. Soc. Nat. Mosc., 37 (3): 240 (1864).

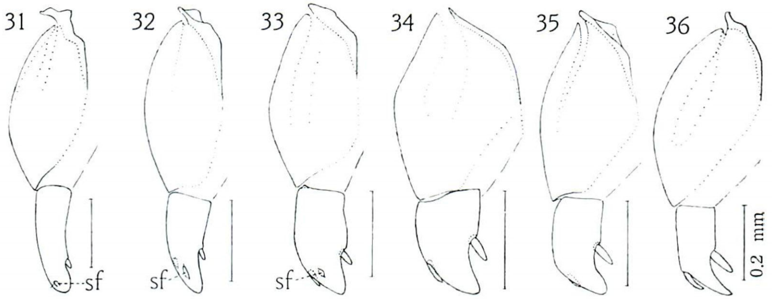
Fourcroy from Europe (designated by Jeannel, 1942).

Anomoeus Fischer-Waldheim, 1822, Ent. Russ., 1: 125–127. Type-species: *Anomoeus dorsalis* Fischer-Waldheim from Kirghiz, Central Asia (the first of the two species mentioned, designated by Habu, 1967).

Psammastes Motschulsky, 1864, Bull. Soc. Nat. Mosc., 37 (3): 240. Type-species: *Cymindis suturalis* Dejean from Egypt (monotypic and original designation).

Supplemental description. Eyes pubescent or glabrous; ventral side of head without setae on level of hind margin of eyes. Mid tarsi of ♂ without adhesive hairs ventrally.

Remarks. I happen to have a few specimens of three species from Canary Islands—*C. velatus* Wollaston, *C. discoideus* Dejean and *C. cinctus* Brullé, identified by H. Lindberg; the apical segment of the styluses has unusually a subapical foramen though has not any seta in the last two species (Figs. 32, 33), and it has a subapical foramen together with a vestigial seta (or two setae closely inserted) in the first species (Fig. 31). There is some possibility that it is due to geographical isolation.



Figs. 31–36. Styluses of foreign *Cymindis* spp. sf: subapical foramen. 31. *C. velatus* Wollaston from Gomera Is., Canaries. 32. *C. discoideus* Dejean from Gran Canaria Is., Canaries. 33. *C. cinctus* Brullé from Gran Canaria Is., Canaries. 34. *C. championi* Andrewes from Nepal. 35. *C. binotatus* Fischer-Waldheim from E. Siberia. 36. *C. equestris* Gebler from Manchuria, N. China.

Key to subgenera

1. Head without posterior supraorbital setae ································ *Pseudocymindis*
— Head with anterior and posterior supraorbital setae ······································ 2
2. Apical segment of labial palpi not well dilated in ♂ and ♀; colouration not metallic ·· *Tarulus*
— Apical segment of labial palpi well dilated and securiform in ♂; colouration metallic; dorsal side strongly punctate ··· *Menas*

Subgenus *Pseudocymindis* HABU

Type-species: *Cymindis yokoyamai* NAKANE [=*C. collaris* MOTSCHULSKY] from Japan (monotypic and original designation).

Pseudocymindis HABU, 1967, Faun. Jap., Carab., Truncatipen.: 65.

Supplemental description. Eyes pubescent.

Key to species

1. Pronotum wider, WP/WH 1.25–1.34, without posterior marginal setae, base well oblique at lateral areas, basal angles at about six-sevenths of median length (Fig. 38) ·· 22. *C. collaris*

— Pronotum less wide, WP/WH 1.19–1.22, with posterior marginal setae, base more strongly oblique at lateral areas, basal angles more forward, at about four-fifths of median length (Fig. 39) ································ 23. *C. rivularis*

22. *Cymindis* (*Pseudocymindis*) *collaris* MOTSCHULSKY

"Kataaka-atokiri-gomimushi"

Cymindis collaris MOTCHOULSKI, 1845, Mém. Acad. Imp. Sci. St.-Pétersb., 5: 48–49, pl. 2, fig. 8 (Siberia); CHAUDOIR, 1873, Berl. Ent. Zeitschr., 17: 94; SAHLBERG, 1880, Kongl. Sv. Vet.-Akad. Handl., 17 (4): 22.

Cymindis pictula BATES: KANO, 1928, Zool. Mag., 40: 209; YOKOYAMA, 1931, Zoku Nippon no Kôchû: 146–147, pl. 19, fig. 9; YOKOYAMA, 1932, Icon. Ins. Jap.: 820, fig. 1614.

Cymindis (*Cymindis*) *yokoyamai* NAKANE, 1963, Fragm. Col., pars 6: 24 (Japan: "Akogigaura; Hayakawa"); NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 50, pl. 25, fig. 14.

Cymindis (*Tarus*) *collaris* MOTSCHULSKY: JEDLIČKA, 1963, Ent. Abh., 28: 453, 456.

Cymindis (*Pseudocymindis*) *yokoyamai* NAKANE: HABU, 1967, Faun. Jap., Carab., Trun-

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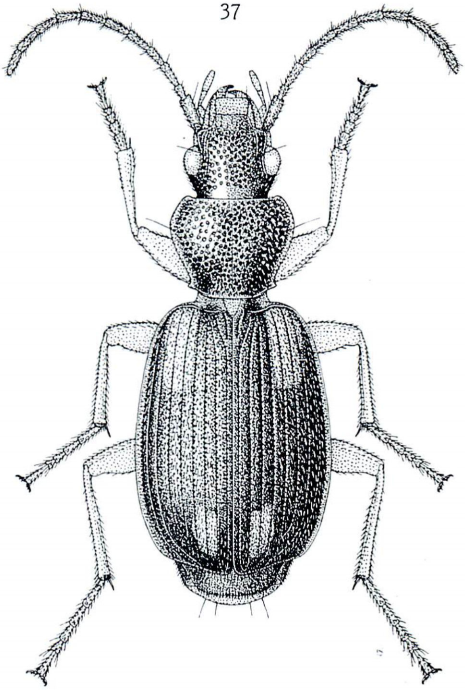

Fig. 37. *Cymindis* (*Pseudocymindis*) *collaris* MOTSCHULSKY, ♀.

catipen.: 65–67, figs. 152, 157, 158, 161, pl. 12-fig. 1.

Supplemental description. Head with neck-constriction indistinct on dorsal side. WH/WF 1.54, WP/WH 1.27, WP/LP 1.24, WP/WBP 1.42, WBP/WAP 1.01, WE/WP 1.60, in one ♂[8]. Pronotum (Fig. 38) with basal angles at about six-sevenths of median length; anterior marginal setae before to behind one-third, posterior setae absent. Elytra with basal border almost complete, fairly rounded at shoulder. Hind tarsi[9] one and one-fourth times as long as head width (♂), segment 5/segment 1=1.07 (♂).

Distribution. Japan: Hokkaido (after NAKANE, 1963 b); Honshu—Tama river-side, Futako, Tokyo M. D., Arahama, Niigata Pref., Azusa river-side, Shimauchi, Nagano Pref., Hayakawa, Yamanashi Pref. ?, Akogigaura, Miye Pref. Mongolia. E. Siberia.

23. *Cymindis* (*Pseudocymindis*) *rivularis* MOTSCHULSKY

"Kawa-atokiri-gomimushi"

Cymindis rivularis MOTCHOULSKI, 1845, Mém. Acad. Imp. Sci. St.-Pétersb., 5: 45–46, pl. 2, fig. 7 (Siberia); CHAUDOIR, 1850, Bull. Soc. Nat. Mosc., 23 (2): 85–86; MORAWITZ, 1862, Mél. Biol., 4: 183; CHAUDOIR, 1873, Berl. Ent. Zeitschr., 17: 95; BATES, 1873, Trans. Ent. Soc. Lond.: 310; ANDREWES, 1928, Trans. Ent. Soc. Lond., 76: 21.

Tarus rivularis MOTSCHULSKY: REITTER, 1923, Wien. Ent. Zeit., 40: 3–4.

Cymindis chaoyangensis KANO, 1935, Insects of Jehol, 6, Col., 1, Carab. (Rep. 1st Sci. Exp. Manchoukuo): 4–5, 6–7, pl. 1 (N. China: "Chao-yang"). According to Dr. V. EMETZ's information.

Cymindis (*Tarus*) *rivularis* MOTSCHULSKY: JEDLIČKA, 1963, Ent. Abh., 28: 453, 456, fig. 169.

Description[10]. Length 7.4–8.2 mm or 8.2–8.8 mm (Siberian and Mongolian ex.), 8.8 mm or 10.2[11] mm (Nagasaki ex.). Width 2.9–3.1 mm (former two), 3.4 mm (latter). Pubescence on body short.

Dark reddish brown, shiny; pronotum with large indistinct dark patch on either side of disc in Nagasaki and Siberian ex., elytra almost black except lateral to apical margin light reddish brown in Nagasaki ex., with two patches, anterior patch larger, on intervals 5 (outer half) to 9, reaching shoulder and lateral margin, patch not distinct in Mongolian ex., posterior patch at subapical area on intervals 3 to 5, interval 1 reddish, legs less dark; ventral side dark reddish brown, epipleura light reddish brown, faintly yellowish.

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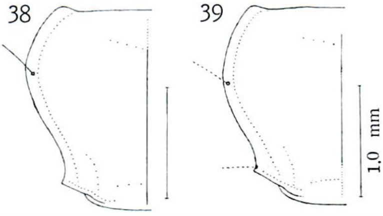
[8] WH/WF 1.46, 1.49, 1.53, WP/WH 1.32, 1.34, 1.25, WP/LP 1.35, 1.33, 1.34, WP/WBP 1.44, 1.41, 1.37, WBP/WAP 1.00, 1.06, 1.05, WE/WP 1.55, 1.49, 1.58, in two ♀♀ from E. Siberia and one ♀ from Mongolia respectively.

[9] Hind tarsi nine-tenths as long as to slightly longer than head width (♀), segment 5/segment 1=1.11, 1.17, 1.25 in two ♀♀ from E. Siberia and one ♀ from Mongolia respectively.

[10] The description is made from one female specimen from Nagasaki, Japan, one male from Ulan-Bator, Mongolia, and one female from Transbaical, Siberia.

[11] The Nagasaki example has the abdomen abnormally expanded as shown in Fig. 40.



Figs. 38, 39. Pronota of *Cymindis* (*Pseudocymindis*) spp.
38. *C. collaris* Motschulsky. 39. *C. rivularis* Motschulsky.

Head convex, but less convex than in *collaris*; dorsal side with large pubescent punctures, interspaces of punctures a little wider than diameter of punctures at central area, clypeus sparsely punctate, anterolateral areas of frons longitudinally sulcate and carinate, not punctate; microsculpture absent; neck-constriction distincter on dorsal side than in *collaris*; eyes moderately large, WH/WF 1.50, 1.50, 1.48 in Nagasaki, Mongolian and Siberian ex. respectively, pubescence almost fallen off in Nagasaki ex.; frontal impressions shallow or faint; antennae reaching basal one-fourth of elytra; apical segment of labial palpi (Fig. 41) one and nine-tenths times as long as wide in ♂, three and three-sevenths times in ♀.

Pronotum (Fig. 39) well convex, cordate, widest at one-third to two-fifths; WP/WH 1.19, 1.22, 1.22, WP/LP 1.22, 1.23, 1.23, WP/WBP 1.36, 1.33, 1.32, WBP/WAP 0.98, 1.09, 1.09, in Nagasaki, Mongolian and Siberian ex. respectively; surface distinctly pubescent-punctate, interspaces of punctures almost as wide as diameter of punctures, punctures rather confluent at basal area; apex even; apical angles slightly protrudent, rounded; base more strongly oblique at lateral areas than in *collaris*; basal angles acute, well protrudent laterally, placed more forward than in *collaris*, at about four-fifths of median length; lateral margins less contracted anteriorly and posteriorly than in *collaris*, well sinuate before basal angles; lateral explanate areas rather wide; anterior marginal setae at or a little before two-fifths, posterior setae a little before basal angles; median line fine; anterior transverse impression obscure, posterior transverse impression somewhat distinct; basal foveae deep.

Wings reduced. Elytra rather convex in Nagasaki ex., less convex in Mongolian ex., rather flat in Siberian ex., widest at or behind middle; WE/WP 1.54, 1.50, 1.44 in Nagasaki, Mongolian and Siberian ex. respectively, more than one and one-third (♂) to one and three-sevenths (♀) times as long as wide; surface densely pubescent-punctate, punctures similar to those of *collaris*; microsculpture rather distinct, isodiametric;

basal border effaced at inner area opposite intervals 1 to 3, forming fully wide obtuse angle at shoulder opposite interval 6 in Nagasaki ex., rounded at shoulder in Mongolian and Siberian ex.; lateral margin fairly dilated towards middle; striae deep; intervals gently convex, pores on interval 3 difficult to observe in Nagasaki ex.; marginal series approximately seventeen.

Legs not densely pubescent; hind tarsi one and one-eighth times as long as head width in ♂, a little longer than head width in ♀, segment 5/segment 1=0.98 (♂), 1.02–1.05 (♀).

Ventral side densely pubescent-punctate, punctures on head and thorax large, epipleura not punctate; metepisterna contracted posteriorly, more than one and three-fifths to one and two-thirds times as long as wide; sternite 6 with two setae at apex on either side in ♂ and ♀.

Aedeagus teneral in single ♂ examined.

Apical segment of styluses (Fig. 42) in Mongolian ♀ shorter and wider than in *collaris*, fairly curved from middle to apex, two and one-fifth or -fourth times as long as wide, apical part somewhat narrowed, well rounded at apex, outer spine at middle, inner spine at subapical area.

Distribution. Japan: Kyushu—Nagasaki, Nagasaki Pref. (G. LEWIS leg.). N. China. Mongolia. E. Siberia.

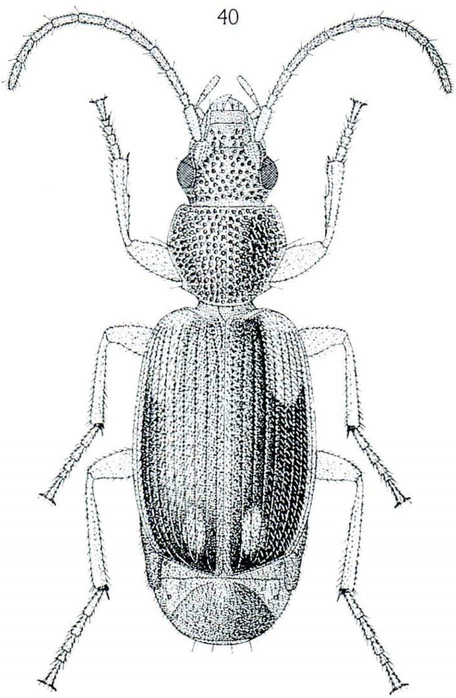
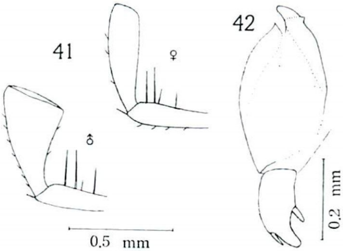


Fig. 40. *Cymindis* (*Pseudocymindis*) *rivularis* MOTSCHULSKY, ♀.



Figs. 41, 42. *Cymindis* (*Pseudocymindis*) *rivularis* MOTSCHULSKY (41. ♂ from E. Siberia, ♀ from Japan; 42. ♀ from Mongolia). 41. Labial palpi in ventral view. 42. Stylus.

Remarks. I improperly conjectured in my first revision that the species identified by BATES as *C. rivularis* was *C. yokoyamai* NAKANE (=*collaris*); I have examined the single older female specimen collected by G. LEWIS in Nagasaki thanks to Mr. M. E. BACCHUS of the British Museum, finding that BATES' identification is quite right. So far as I am aware this specimen is the sole representative found in Japan, and two cases are conceivable either this species was once widely distributed and has now become extinct in Japan or the single specimen happened to be introduced to Nagasaki by ship.

Subgenus *Tarulus* BEDEL

Type-species: *Tarus zargoides* WOLLASTON from Tenerife Is., N. W. Africa (monotypic).

Tarulus BEDEL, 1906, Cat. Col. N. Afr., 1: 253.

Supplemental description. Eyes generally pubescent.

24. *Cymindis* (*Tarulus*) *vaporariorum immaculatus* DEJEAN et BOISDUVAL

"Okokku-atokiri-gomimushi"

Cymindis immaculata DEJEAN and BOISDUVAL, 1829, Icon. Col. Eur., 1: 93, pl. 10, fig. 4 (Kamchatka); DEJEAN, 1831, Spec. Gén. Col., 5: 310.

Tarus immaculatus ESCHSCHOLTZ: MOTSCHULSKY, 1864, Bull. Soc. Nat. Mosc., 37 (4): 300.

Cymindis subarcticus KANO, 1933, Bull. Biol. Soc. Japan, 4: 96, 106, 118 (N. Kuriles; Saghalien: Oboedomari).

Cymindis subarctis [!] KANO, 1933, *do.*: fig. 3 in p. 96.

Cymindis (*Tarulus*) *subarcticus asahiensis* HABU and BABA, 1962, Akitu, 10: 13–14, figs. 2, 4 (Japan: Mt. Asahidake); HABU, 1967, Faun. Jap., Carab., Truncatipen.: 65, 69, figs. 149, 150.

Cymindis (*Tarulus*) *subarcticus subarcticus* KANO: HABU and BABA, 1961, Akitu, 10: 13–14, figs. 1, 3; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 65, 67–69, figs. 35, 118, 147, 148,

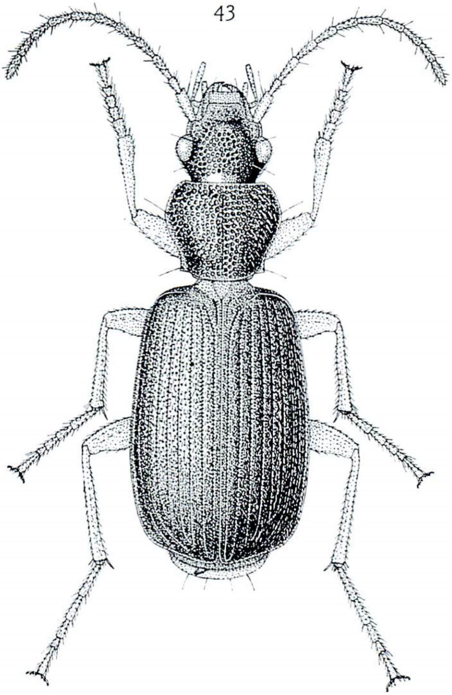


Fig. 43. *Cymindis* (*Tarulus*) *vaporariorum immaculatus* DEJEAN et BOISDUVAL, ♂.

151, pl. 12-fig. 3; KRYVOLUTSKAJA, 1973, Entomofaun. Kuril Isls.: 60, 69, 237.

Cymindis subarctica KANO: NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 50, pl. 25, fig. 15.

Cymindis (*Tarus*) *vaporariorum* a. *immaculata* DEJEAN: JEDLIČKA, 1963, Ent. Abh., 28: 453, 455.

Cymindis (*Tarulus*) *vaporariorum* LINNÉ: Крыжановский et al., 1975, Энт. Иссл. Дал. Вост., 3: 125, 141.

Supplemental description. Neck-constriction absent on dorsal side. WH/WF 1.51–1.58, mean 1.55 (♂), 1.48, 1.48, 1.51 (♀), WP/WH 1.14–1.21, mean 1.17, WP/LP 1.15–1.25, mean 1.21, WP/WBP 1.34–1.42, mean 1.37, WBP/WAP 1.04–1.12, mean 1.07, WE/WP 1.61–1.75, mean 1.69, in five ♂♂ and three ♀♀ 12). Pronotum with basal angles at seven-eighths to nine-tenths of median length; anterior marginal setae at one-third, posterior setae slightly before basal angles. Elytral basal border obliterated or becoming indistinct at inner part opposite intervals 1 to 3, widely rounding at shoulder. Hind tarsi more than one and one-fourth to one and three-eighths times as long as head width in ♂, one and one-sixth to -fifth times in ♀, segment 5/segment 1=0.74–0.93 in ♂, 0.72–0.85 in ♀.

Distribution. Japan: Hokkaido—Mts. Daisetsu; Honshu—Mt. Yakeishidake, Iwate Pref. (K. SHIRAHATA leg.), Mt. Asahidake and Mt. Shôrenge, Niigata Pref. (K. BABA leg.). N. Kuriles. Kamchatka. Saghalien. E. Siberia.

Subgenus *Menas* MOTSCHULSKY

Type-species: *Carabus miliaris* FABRICIUS [=*Cymindis variolosa* (FABRICIUS)] from Europe (monotypic and original designation).

Menas MOTSCHULSKY, 1864, Bull. Soc. Nat. Mosc., 37 (3): 240.

Supplemental description. Eyes glabrous (in *daimio* and *faldermanni*).

25. *Cymindis* (*Menas*) *daimio* BATES

"Daimyô-atokiri-gomimushi"

Cymindis daimio BATES, 1873, Trans. Ent. Soc. Lond.: 310–311 (Japan: Nagasaki); SEMENOW, 1895, Horae Soc. Ent. Ross., 29: 331, 334; MATSUMURA, 1905, Thousand Ins. Japan, 2: 141, pl. 32, fig. 8; YOKOYAMA, 1931, Zoku Nippon no Kôchû: 141, pl. 18, fig. 13; MATSUMURA, 1931, 6000 Illustr. Ins. Japan-Empire: 111; MATSUMURA, 1931, Illustr. Common Ins. Japan, 3: 16 (in Jap.), 23 (in Eng.), pl. 4, fig. 7; YOKOYAMA, 1932, Icon. Ins. Jap.: 820, fig. 1613; KATO, 1933, Three Colour Illustr. Ins. Japan, fasc. 9: pl. 45, fig. 6; JEDLIČKA, 1935, Ark. Zool., 27

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12) WH/WF 1.48, 1.39, WP/WH 1.24, 1.22, WP/LP 1.26, 1.26, WP/WBP 1.39, 1.27, WBP/WAP 1.10, 1.14, WE/WP 1.63, 1.63, in one ♂ and one ♀ from E. Siberia respectively.

A (4): 18; HIRAYAMA, 1940, Genshoku Kôchû Zufu: 87, pl. 31, fig. 12; HABU, 1950, Icon. Ins. Jap. (rev. ed.): 944, fig. 2684; ISHIHARA and MIYATAKE, 1951, Collecting & Breeding, 13: 234; OHKURA and UÉNO, 1955, Coloured Illustr. Ins. Japan, Col.: 109, pl. 40, fig. 146; OHKURA and UÉNO, 1955, *do.* (rev. ed.): 43, pl. 12, fig. 220; JEDLIČKA, 1960, Ann. Hist.-Nat. Mus. Natl. Hung., 52: 231; NAKANE, 1975, Gakken Chû-Kô-Sei Zukan, Ins. 2 (Col.): 302, pl. 44.

Cymindis Daimio BATES: CHAUDOIR, 1875, Bull. Soc. Nat. Mosc., 49 (2): 57.

Cymindis (*Menas*) *Tschitscherini* SEMENOW, 1895, Horae Soc. Ent. Ross., 29: 126–128 (S.-E. Mongolia). According to Dr. V. EMETZ's information.

Cymindis Tschitscherini SEMENOW: SEMENOW, 1895, Horae Soc. Ent. Ross., 29: 331, 335.

Cymindis daimio BATES var. *nigrifemoris* HABU, 1941, Ent. World., 9: 654–655 (Japan: Hokkaido).

Cymindis (*Menas*) *daimio* BATES: JEANNEL, 1942, Faun. France, 40: 1043 (footnote); HABU and INOUYE, 1963, Kontyû, 31: figs. 1, 3 in pp. 68–69; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 65, 70–71, figs. 135, 155, 159, pl. 2-fig. 3.

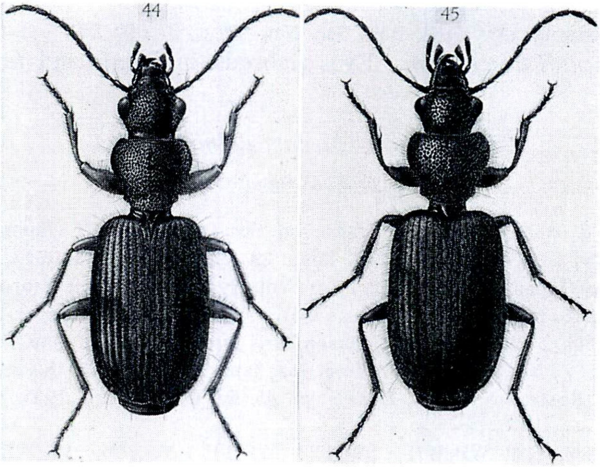
Cymindis (*Menas*) *nigrifemoris* HABU and INOUYE, 1963, Kontyû, 31: 68–70, figs. 2, 4 (Japan: Hokkaido); HABU, 1967, Faun. Jap., Carab., Truncatipen.: 65, 71–74, figs. 10, 153, 154, 156, 160, pl. 2-fig. 4.

Cymindis (*Menas*) *daimio daimio* BATES: NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 50.

Cymindis (*Menas*) *daimio nigrifemoris* HABU et INOUYE: NAKANE, 1963, *do.*: 50, pl. 25, fig. 13.

Cymindis (*Tarus*) *daimio* BATES: JEDLIČKA, 1963, Ent. Abh., 28: 452, 454–455.

Cymindis (*Tarus*) *tschitscherini* SEMENOW: JEDLIČKA, 1963, *do.*: 452, 455, pl. 4, fig. 33.



Figs. 44, 45. *Cymindis* (*Menas*) *daimio* BATES, ♂♂ (45. f. *nigrifemoris*).

Cymindis nigrifemoris HABU et INOUYE: SHIBATA, 1967, Ent. Rev. Japan, 19: 73; NAKANE, 1975, Gakken Chû-Kô-Sei Zukan, Ins. 2 (Col.): 302.

Supplemental description. Femora sometimes black, with reddish apex (f. *nigrifemoris* HABU). WH/WF 1.37-1.48, mean 1.43, WP/WH 1.19-1.25, mean 1.23, WP/LP 1.12-1.21, mean 1.17, WP/WBP 1.40-1.53, mean 1.47, WBP/WAP 0.90-0.98, mean 0.94, in four ♂♂ and two ♀♀, WE/WP 1.44-1.47, mean 1.46, in two ♂♂ and two ♀♀[13]. Pronotum with basal angles at six-sevenths of median length. Elytral basal border widely abbreviate opposite intervals 1 to 5. Hind tarsi one and one-twelfth to -fifth times (♂) or one and one-twelfth times (♀) as long as head width, segment 5/segment 1=0.93-1.00 (♂), 1.04 (♀).

Distribution. Japan: Hokkaido; Honshu; Shikoku; Kyushu. Korea. E. Siberia. N. China. Mongolia.

Genus *Somotrichus* SEIDLITZ

Type-species: *Carabus elevatus* FABRICIUS [=*Somotrichus unifasciatus* (DEJEAN)] from France (monotypic).

Somotrichus SEIDLITZ, 1887, Faun. Balt. (2. ed.): Gatt. 7.

Supplemental description. Ventral side of head with one pair of distinct setae on level of hind margin of eyes. Mid tarsi of ♂ without adhesive hairs ventrally.

26. *Somotrichus unifasciatus* (DEJEAN)

"Futoobi-atokiri-gomimushi"

Carabus elevatus FABRICIUS[14], 1792, Ent. Syst., 1: 162 (France).

Lebia unifasciata DEJEAN, 1831, Spec. Gén. Col., 5: 389-390 ("Ile-de-France"); COQUER, 1866, Ann. Soc. Ent. France, (4) 6: 300.

Lebia elevata FABRICIUS: BRULLÉ, 1834, Silb. Rev., 2: 108; SCHMIDT-GOEBEL, 1846, Faun. Col. Birm.: 43-44.

Coptodera 2-cincta HOPE, 1845, Trans. Ent. Soc. Lond., 4: 15 (S. China: "Chusan; Canton").

Coptodera massiliensis FAIRMAIRE, 1849, Ann. Soc. Ent. France, (2) 7: 419-420 (France: Marseille).

Somoplatus elevata FABRICIUS: CHAUDOIR, 1871, Bull. Soc. Nat. Mosc., 43 (3/4): 113.

Somotrichus elevatus FABRICIUS: SEIDLITZ, 1887, Faun. Balt. (2. ed.): Gatt. 7; GANGLBAUER, 1892, Käf. Mitteleur., 1: 401; ALLUAUD, 1916, Ann. Soc. Ent.

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[13] WH/WF 1.38, WP/WH 1.22, WP/LP 1.23, WP/WBP 1.48, WBP/WAP 0.91, WE/WP 1.49 in one ♀ from E. Siberia.

[14] Homonym of *Carabus elevatus* FABRICIUS, 1787 (=*Scaphinotus elevatus*), from Central America (after ANDREWES, 1919 b).

France, 85: 51; ANDREWES, 1921, Trans. Ent. Soc. Lond.: 157; HORION, 1941, Faun. Deutsch. Käf., 1: 333; JEANNEL, 1942, Faun. France, 40: 1032–1033; JEANNEL, 1949, Col. Carab. Rég. Malg., 3: 916–917, figs. 444, 445 a; JEANNEL, 1949, Faun. France, 51: pl. 19, fig. 209; HATCH, 1953, Univ. Wash. Publ. Biol., 16: 25, 28, 150, 153; ANTOINE, 1962, Mém. Soc. Sci. Nat. Phys. Maroc, Zool., N. S., no. 9: 550–551, fig. 114 a; JEDLIČKA, 1963, Ent. Abh., 28: 362, fig. 109; MAGISTRETTI, 1965, Faun. Ital., Col., Cicind., Carab.: 461; DARLINGTON, 1968, Bull. Mus. Comp. Zool., 137: 83; DARLINGTON, 1970, Ins. Micronesia, 15 (1): 40–41, fig. 6 d; LOUWERENS, 1970, Nat. Hist. Rennel Isl., Br. Solomon Isls., 6: 90.

Somotrichus unifasciatus DEJEAN: ANDREWES, 1919, Trans. Ent. Soc. Lond.: 178–179; ANDREWES, 1923, Trans. Ent. Soc. Lond.: 21; HINTON, 1945, Monogr. Beetles Associated with Stored Products, 1: 32–34, fig. 30; HABU, 1954, Bull. Natl. Inst. Agr. Sci., (C) no. 4: 229–231, figs. 1, 2; BASILEWSKY, 1962, Explor. Parc Nat. Garamba, fasc. 29, Carab. 1: 48; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 51, pl. 26, fig. 3; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 75–77, figs. 9, 34, 119, 134, 162–165, pl. 12-fig. 2; BALL, 1975, Quaest. Ent., 11: 169–171, fig. 43 E.

Lebia sp.: ÔKUNI, 1928, Rep. Dep. Agr. Govern. Res. Inst. Formosa, no. 34: 41 (*Dromius* sp. in pl. 1, fig. 5).

Coptodera massiliensis DEJEAN: PORTEVIN, 1929, Hist. Nat. Col. France, 1, Ency. Ent., (A) 12: 162.

Supplemental description. WH/WF 1.44–1.55, mean 1.51, WP/WH 1.19–1.27, mean 1.21, WP/LP 1.53–1.65, mean 1.58, WP/WBP 1.13–1.19, mean 1.16, in five ♂♂ and four ♀♀, WE/WP 1.44–1.55, mean 1.51, in four ♂♂ and three ♀♀ from Japan and Formosa. Hind tarsi six-sevenths to nine-tenths as long as head width, segment 1 one and five-eighths to one and three-fourths times (♂) or just to more than twice (♀) as long as segment 2, segment 5 shorter than segment 1, proportion 0.86–0.92.

46

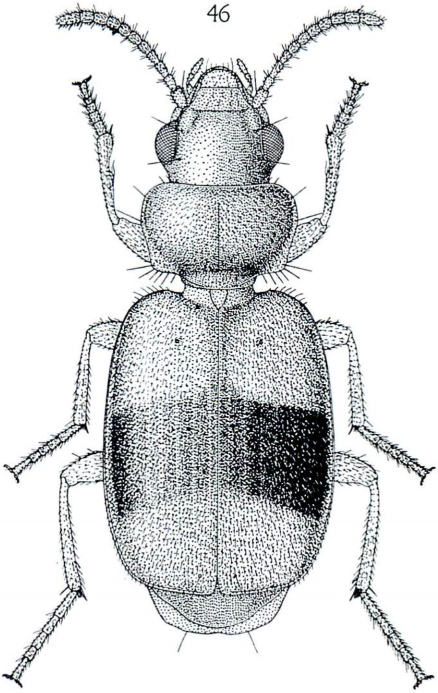


Fig. 46. *Somotrichus unifasciatus* (DEJEAN), ♂.

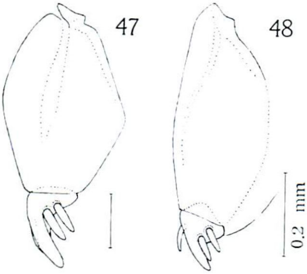
Distribution. Japan: Ryukyus. Formosa. S. China. Java. Celebes. Moluccas. Micronesia. Ceylon. India. Turkey. Africa. Europe (not established ?). N. America. S. America. It was found in Tokyo in nuts from Los Angeles (U.S.A.) (after Habu, 1954), although probably not established in Honshu of Japan.

C. Subtribe *CATASCOPINA*

Type-genus: *Catascopus* Kirby.

Catascopi Csiki, 1932, Col. Cat., pars 124: 1352 (partim).

Supplemental characteristics. Ventral side of head with one pair of setae on level of hind margin of eyes. Claws smooth or denticulate. Hemisternites large; apical segment of styluses (Figs. 47, 48) without secondary setae.



Figs. 47, 48. Styluses of foreign Catascopina.
47. *Catascopus* (*Catascopus*) *fascialis* Wiedemann f. *basalis* Chaudoir from Malaya. 48. *Miscellus javanus* Klug from Malaya.

Genus *Catascopus* Kirby

Type-species: *Catascopus hardwickii* Kirby from India (monotypic).

Catascopus Kirby, 1825, Trans, Linn. Soc. Lond., 14: 94–97.

Supplemental description. Mentum moderately emarginate, with one pair of fully long setae, setae well distant from each other. Mid tarsi of ♂ without adhesive hairs or with adhesive hairs on segment 1 ventrally; claws smooth.

Subgenus *Catascopus* Kirby

27. *Catascopus* (*Catascopus*) *ignicinctus* Bates

"Kinheri-atoba-gomimushi"

Catascopus ignicinctus Bates, 1883, Trans. Ent. Soc. Lond.: 280 (Japan: "Yuyama; Konose"); Nakane, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 53, pl. 27, fig. 11; Jedlička, 1963, Ent. Abh., 28: 386; Habu, 1967, Faun. Jap., Carab., Truncatipen.: 78–81, figs. 11, 36, 166–169, pl. 2-fig. 2; Hansen, 1967, Bull. Ann. Soc. R. Ent. Belg., 103: 175–176, 182.

Catascopus Székessyi Jedlička, 1952, Ann. Hist. Nat. Mus. Natl. Hung. (N. S.), 2: 81 (Formosa: "Fuhosho").

Catascopus szekessyi Jedlička: Jedlička, 1963, Ent. Abh., 28: 381, 387.

Distribution. Japan: Kyushu (southern part). Formosa. Indo-China: Laos.

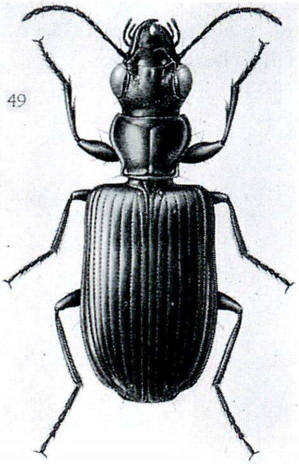
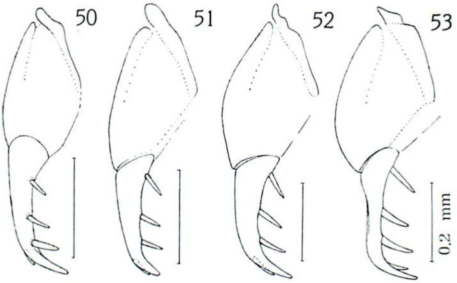


Fig. 49. *Catascopus* (*Catascopus*) *ignicinctus* BATES, ♀.



Figs. 50–53. Styluses of Pericalina spp. 50. *Pericalus* (*Coeloprosopus*) *quadrimaculatus* MACLEAY from Malaya. 51. *Coptodera* (*Coptoderina*) *eluta* ANDREWES. 52. *C. marginata* DUPUIS from Sata, Kagoshima Pref. 53. *C. japonica* BATES from Tachen, Formosa.

D. Subtribe *PERICALINA*

Type-genus: *Pericalus* MACLEAY.

Péricalides LACORDAIRE, 1854, Gen. Col., 1: 68.

Coptodérides CHAUDOIR, 1868, Ann. Soc. Ent. Belg., 12: 163. Type-genus: *Coptodera* DEJEAN.

Supplemental characteristics. Ventral side of head with one pair of setae on (sometimes before) level of hind margin of eyes. Apical segment of styluses (Figs. 50–53) without secondary setae.

Genus *Coptodera* DEJEAN

Type-species: *Coptodera festiva* DEJEAN from Cuba (the first of the five species mentioned, designated by HABU, 1967).

Coptodera DEJEAN, 1825, Spec. Gén. Col., 1: 273.

Ectinochila CHAUDOIR, 1883, Col. Nov., 1: 21. Type-species: *Ectinochila tesselata* CHAUDOIR [=*Coptodera aurata* (MACLEAY)] from Australia (monotypic).

Supplemental description. Labrum (Figs. 56–62) fairly long though wider than long[15], longitudinally impressed at middle. Mid tarsi of ♂ without or with adhesive hairs on segments 1 (apically) and 2 ventrally

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[15] The length of the labrum in the supplemental descriptions is not the median length but the maximum length, and the proportion is merely a rough estimation inasmuch as the labrum is not fixed to the clypeus.

(hairs difficult to observe in small spp.). Styluses (Figs. 51–53) almost similar in form in Japanese spp. except *japonica*.

Subgenus *Coptoderina* JEANNEL

Type-species: *Coptodera equestris* BOHEMAN from S. Africa (original designation).
Coptoderina JEANNEL, 1949, Col. Carab. Malg., 3: 924, 925, 933.

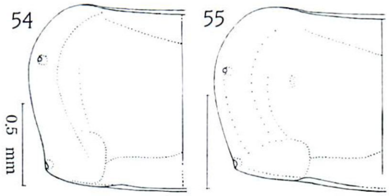
Key to species

1. Elytra with anterior and posterior patches ·································· 2
— Elytra with only posterior patch, or without any patch ······························ 8
2. Elytra rather spinous at apex, anterior patch small, limited on interval 4, posterior patch divided into two parts, inner part on intervals 2 and 3, outer part on intervals 4 to 8, interval 3 with four pores ······························ 34. *C. eluta*
— Elytra more or less rounded at apex, anterior patch developed ···················· 3
3. Elytral interval 3 with two pores, one behind basal border, one before apex; head on dorsal side, pronotum and elytra with aeneous tinge, elytral patches distinctly dentate, posterior patch reaching suture ······················· 32. *C. esakii*
— Elytral interval 3 with three pores ·· 4
4. Length less than 7.0 mm; dorsal side faintly aeneous or bronzy; lateral margins of pronotum sinuate before basal angles; prosternum with pubescent area at middle in ♂ ·· 5
— Length more than 8.0 mm; dorsal side without metallic tinge; lateral margins of pronotum not or slightly sinuate before basal angles; prosternum without pubescent area at middle in ♂ and ♀ ··· 6
5. Elytral interval 3 with second pore at about three-fifths, placed more anteriorly than level of apex of posterior patch (on interval 4 or 5), posterior patch moderately prolonged anteriorly on intervals 4 and 5··········· 31. *C. subapicalis* f. *mona*
— Elytral interval 3 with second pore at about two-thirds, fully behind level of apex of posterior patch (on interval 5), posterior patch exceedingly prolonged forward on intervals 4 and 5, a little more prolonged forward on interval 5 than on interval 4 ·· 33. *C. taiwana*
6. Lateral margins of pronotum and of elytra rather reddish, posterior patch of elytra not reaching suture; larger species, length at least 9.5 mm (up to apex of elytra), width at least 4.5 mm; labrum shorter, not well contracted apically, apex wider, not distinctly emarginate, outer setae a little behind level of four inner setae (Fig. 56) ··· 28. *C. japonica*
— Wide lateral explanate-reflexed areas of pronotum and lateral margin of elytra more or less yellowish; length at most 9.2 mm (up to apex of elytra), width at most 4.1 mm; labrum longer, well contracted apically, apex narrower, emarginate, outer setae fairly or fully behind level of four inner setae (Figs. 57, 58)········ 7
7. Pronotum fully wide and transverse, WP/WH 1.31–1.36, WP/LP 1.92–1.97, lateral furrows between median convex area and lateral explanate areas indistinct, lateral explanate areas wider, hardly defined, slightly reflexed (Fig. 55); elytral patches smaller, posterior patch not extending onto interval 1 ······ 29. *C. osakana*

— Pronotum less wide, WP/WH at most 1.31, WP/LP at most 1.82, lateral furrows between median convex area and lateral explanate areas rather distinct, lateral explanate areas moderately wide, defined, fairly reflexed (Fig. 54) ································30. *C. marginata*

8. Elytra rather spinous at apex, posterior patch sometimes absent (f. *unicolor*), interval 3 with four dorsal pores ···························· 34. *C. eluta*

— Elytra more or less rounded at apex, interval 3 with three dorsal pores ··· ······························· ····················9



Figs. 54, 55. Pronota of *Coptodera* (*Coptoderina*) spp.
54. *C. marginata* DUPUIS from Formosa.
55. *C. osakana* (NAKANE, OHKURA et UÉNO) (paratype).

9. Length less than 7.0 mm; dorsal side with bronzy tinge; lateral margins of pronotum sinuate before basal angles; posterior patch of elytra reaching suture ··· ··· 31. *C. subapicalis*

— Length more than 7.5 mm; dorsal side without bronzy tinge; lateral margins of pronotum not or slightly sinuate before basal angles; posterior patch of elytra not reaching suture ··· 29. *C. osakana* f. *tsushimana*

I) *japonica*-group

Revised characteristics. Mid tibiae of ♂ with two (two or three in *osakana*) incisions before apex on ventral side; mid tarsi of ♂ with well visible adhesive hairs on segment 1 (apically) and segment 2 on ventral side. Prosternum without pubescent area at middle in ♂ and ♀.

28. *Coptodera* (*Coptoderina*) *japonica* BATES

"Ko-kinoko-gomimushi"

Coptodera Japonica BATES, 1883, Trans. Ent. Soc. Lond.: 281, pl. 13, fig. 4 (Japan: "Kiushiu").

Coptodera formosana DUPUIS, 1912, Ann. Soc. Ent. Belg., 56: 328–334 (Formosa: "Hoozan").

Coptodera japonica BATES: KAMIYA, 1938, Nippon no Kôchû, 2: 59–60, pl. 7, fig. 2; JEDLIČKA, 1963, Ent. Abh., 28: 348.

Coptoderina japonica japonica BATES: NAKANE and OHKURA, 1956, Ent. Rev. Japan, 7: 47, 49, 50, pl. 10, fig. 1.

Coptoderina japonica formosana DUPUIS: NAKANE and OHKURA, 1956, Ent. Rev. Japan, 7: 47, 49, 50.

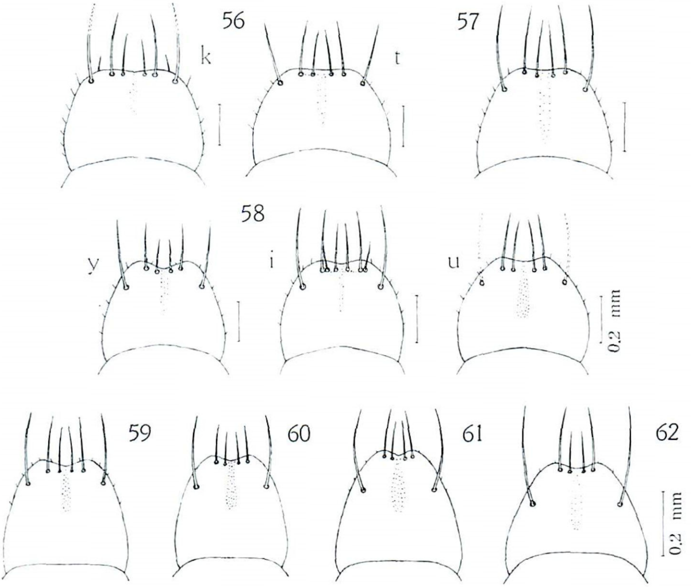
Coptodera (*Coptoderina*) *japonica* BATES: HABU, 1957, Kontyû, 25: 117; HABU, 1961, Ent. Rev. Japan, 12: 46; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 83, 84–86, figs. 12, 122, 171, 173 a & b, 176, 179, pl. 3-fig. 1 (partim).

Coptoderina japonica BATES: NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 51, pl. 26, fig. 6; NAKANE, 1975, Gakken Chû-Kô-Sei Zukan, Ins. 2 (Col.): 268, pl. 44.

Revised description. Length 9.5–10.4 mm (from apex of mandible to apex of elytra) or 9.7–10.6 mm (to apex of abdomen). Width 4.5–4.7 mm.

Black, shiny; apical part of clypeus, labrum, mandibles and palpi dark reddish brown, antennae reddish brown, segments 1 to 3 sometimes faintly dark, lateral margins of pronotum and of elytra rather reddish, femora and tibiae dark reddish brown, tarsi reddish brown; elytral patches reddish yellow, anterior patch covering intervals 3 to 7, posterior patch large, dentate, on intervals 2 to 8, prolonged anteriorly on intervals 4 and 5, well prolonged posteriorly only on interval 4; ventral side reddish black.

Head slightly convex between eyes, frons with one pair of shallow round depressions before mid-eye level; dorsal side microscopically, rather densely punctate; microsculpture distinct, isodiametric; neck-constriction faintly visible on dorsal side; WH/WF 1.82, 1.83 1.80 in



Figs. 56–62. Labra of *Coptodera* (*Coptoderina*) spp.
56. *C. japonica* BATES. k. ex. from Kurokawa, Niigata Pref. t. Tachen, Formosa. 57. *C. osakana* (NAKANE, OHKURA et UÉNO). 58. *C. marginata* DUPUIS. y. ex. from Yaku Is., Satsunans. i. Iriomote Is., Ryukyus (aberration). u. Urai, Formosa. 59. *C. subapicalis* PUTZEYS. 60. *C. esakii* (NAKANE). 61. *C. taiwana* (NAKANE). 62. *C. eluta* ANDREWES.

one ♂ from Japan and one ♂ and one ♀ from Formosa; frons with two carinae along inner margin of eyes on either side, inner carinae generally faint; frontal impressions rather shallow; labrum (Fig. 56) fairly transverse, at least one and two-fifths times as wide as long, apex relatively wide, not or slightly emarginate, outermost setae not fully distant from apex, a little behind level of four inner setae which are inserted in straight line.

Pronotum somewhat convex on disc, widest at one-third; WP/WH 1.24, 1.21, 1.21, WP/LP 1.74, 1.72, 1.73, WP/WBP 1.15, 1.16, 1.14, in one ♂ from Japan and one ♂ and one ♀ from Formosa; surface minutely, densely punctate, transversely rugose on disc; microsculpture distinct, forming wide meshes on disc; apex gently emarginate, completely bordered; apical angles faintly protrudent, widely rounded; base bordered except lateral areas; basal angles obtuse; lateral margins well rounded anteriorly, gently, almost straightly contracted posteriorly, not or slightly sinuate before basal angles; median line fine, reaching apex, effaced at basal area, disc somewhat depressed along median line; anterior and posterior transverse impressions deep; basal foveae fully deep, wide.

Wings normal. Elytra somewhat convex, widest at about middle; WE/WP 1.69, 1.69 in one ♂ from Japan and one ♀ from Formosa, a little more than one and one-third to one and two-fifths times as long as wide; surface finely, sparsely punctate; microsculpture distinct, forming transverse meshes; shoulder not protrudent forward; basal border widely rounded at shoulder; inner apical angle somewhat rounded; striae distinct, obscurely crenulate; intervals convex, interval 7 more convex at basal half than others, interval 3 with three pores at one-twelfth to -eleventh, behind two-thirds and before apex, first pore adjoining stria 3, other pores adjoining stria 2; marginal series uninterrupted, with fifteen pores.

63

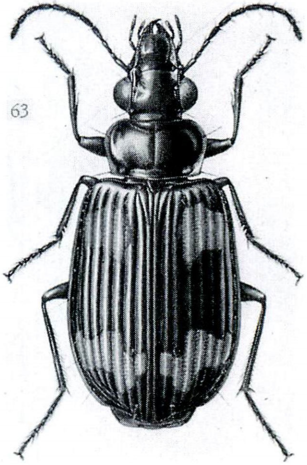


Fig. 63 *Coptodera* (*Coptoderina*) *japonica* Bates, ♂.

Hind tarsi as long as head width, segment 1 one and six-sevenths (in one ♀ from Japan) or two and one-seventh to -fifth times (two ex. from Formosa) as long as segment 2, segment 5/segment 1=0.76, 0.64, 0.63 in one ♂ from Japan and two ex. from Formosa respectively.

Aedeagus convex on dorsal side, apex bent ventrally, apical orifice opened almost on ventral side; apical lamella in ventral view almost triangular, as wide as long, apex somewhat rounded.

Styluses (Fig. 53) (in Tachen ex.) with basal segment wider than usual, apical segment narrower and more curved at subapical area than in other spp. of Japan, inner side fairly depressed, spines fully long.

Distribution. Japan: Honshu; Kyushu. Formosa.

Remarks. As the description in the Fauna Japonica has erroneously been made from the two species, *C. japonica* and *C. marginata,* I revise it here on the basis of one male specimen from Japan (Kurokawa, Niigata Pref., K. BABA leg.) and one male and one female from Formosa (Tachen, Y. MIYAKE leg.). The elytral patches are almost same in the Japanese and Formosan examples, but proportions in the first, second and fifth segment of the hind tarsi are different between them (see the description); further material may elucidate whether these proportions signify mere individual variations or geographical variations.

29. *Coptodera* (*Coptoderina*) *osakana* (NAKANE, OHKURA et UÉNO)

"Hime-kinoko-gomimushi"

Coptoderina osakana NAKANE, OHKURA et UÉNO, in OHKURA and UÉNO, 1955, Coloured Illustr. Ins. Japan, Col.: 106–107, pl. 39, fig. 135 (Japan: Osaka; Kyoto); OHKURA and UÉNO, 1955, *do.* (rev. ed.): 42, pl. 11, fig. 209; NAKANE and OHKURA, 1956, Ent. Rev. Japan, 7: 46, 48, 49, pl. 10, fig. 2; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 51, pl. 26, fig. 7.

Coptodera (*Coptoderina*) *osakana* NAKANE, OHKURA et UÉNO: HABU, 1957, Kontyû, 25: 117; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 83, 84, 87–88, figs. 180, 185, pl. 13-figs. 1, 2.

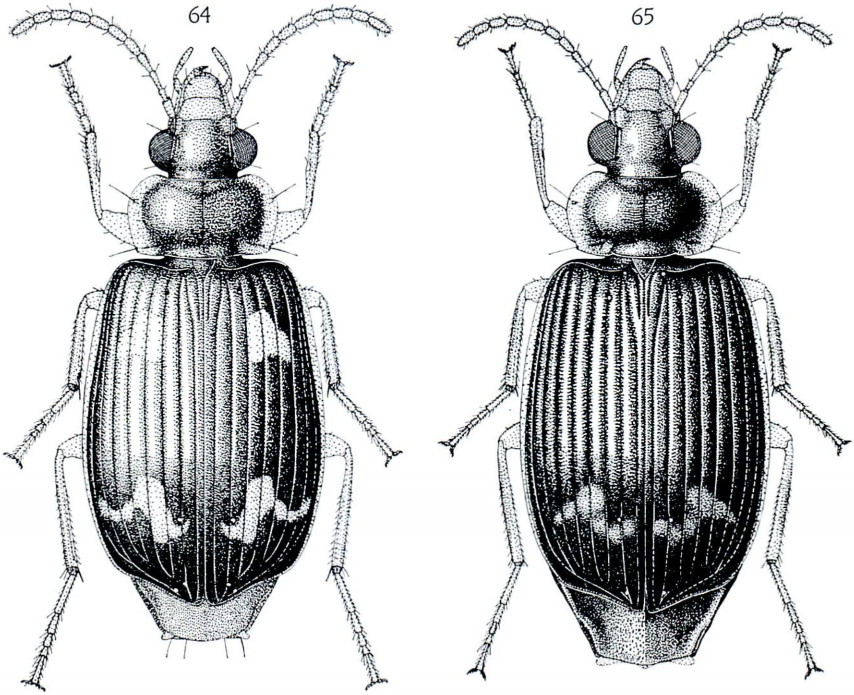
Coptodera (*Coptoderina*) *marginata osakana* NAKANE, OHKURA et UÉNO: HABU, 1961, Ent. Rev. Japan, 12: 46.

Coptodera (*Coptoderina*) *marginata tsushimana* HABU, 1961, Ent. Rev. Japan, 12: 46, pl. 8, fig. 1 (Japan: Tsushima Is.).

Coptodera osakana NAKANE, OHKURA et UÉNO: JEDLIČKA, 1963, Ent. Abh., 28: 348, fig. 229.

Coptodera marginata tsushimana NAKANE: JEDLIČKA, 1963, Ent. Abh., 28: 351, fig. 230.

Supplemental description. Labrum (Fig. 57) one and two-sevenths to one and one-half times as wide as long, apex narrower than in *japonica,* hardly or shallowly emarginate, outer setae fairly distant from apex, fairly behind level of four inner setae, four inner setae inserted almost in a line or second and fourth setae a little before level of two median setae. WH/WF 1.83–1.90, mean 1.86, WP/WH 1.31–1.36, mean 1.34, WP/LP 1.92–1.97, mean 1.94, WP/WBP 1.14–1.17, mean 1.15, in two ♂♂ and two ♀♀, WE/WP 1.62 in one ♂. Pronotum with lateral explanate areas wide, less reflexed than in *japonica* and *marginata,* not defined from central convexity. Hind tarsi as long as head width, segment



Figs. 64, 65. *Coptodera* (*Coptoderina*) *osakana* (Nakane, Ohkura et Uéno), ♂ ♀ (65. f. *tsushimana*).

1 more than twice to two and one-fifth times as long as segment 2, segment 5/segment 1 = 0.65–0.71.

Distribution. Japan: Honshu; Kyushu—Aka, Fukuoka Pref. (Y. Takakura leg.), Tsushima Is., Nagasaki Pref. (M. Chûjô leg.).

30. *Coptodera* (*Coptoderina*) *marginata* Dupuis

"Nise-hime-kinoko-gomimushi"

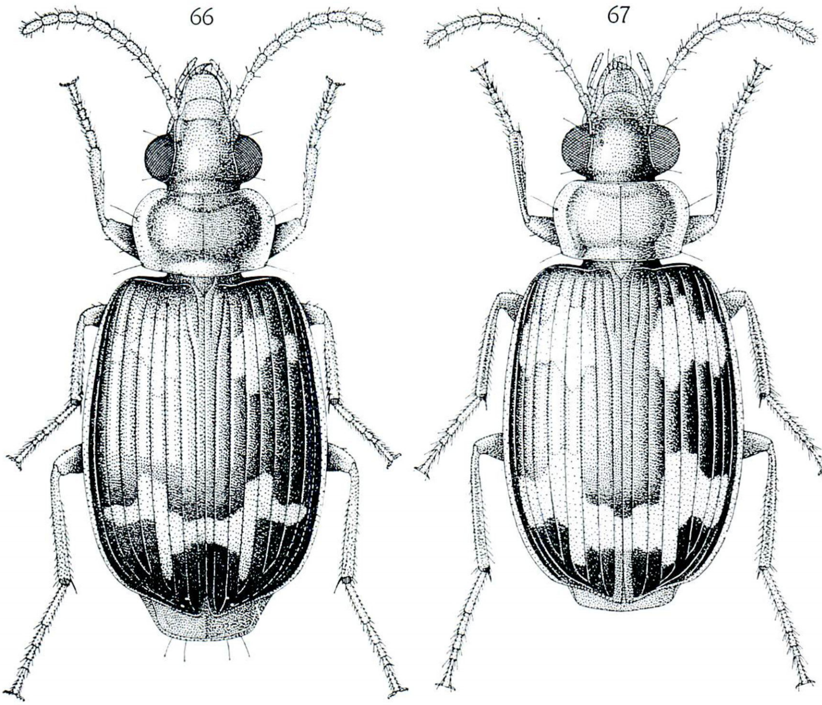
Coptodera formosana Dupuis var. *marginata* Dupuis, 1912, Ann. Soc. Ent. Belg., 56: 329 (Formosa: "Hoozan").

Coptoderina marginata Dupuis: Nakane and Ohkura, 1956, Ent. Rev. Japan, 7: 46, 48, 50, pl. 10, fig. 2 d′.

Coptodera (*Coptoderina*) *marginata* Dupuis: Habu, 1967, Faun. Jap., Carab., Truncatipen.: 83, 88–89, fig. 183, pl. 12-fig. 4.

Coptodera (*Coptoderina*) *japonica* Bates: Habu, 1967, *do.*: 83, 84–86, figs. 39, 173 c & d (partim).

Revised description. Length 7.4–9.2 mm or 8.1–9.5 mm. Width 3.5–4.1



Figs. 66, 67. *Coptodera* (*Coptoderina*) *marginata* Dupuis, ♂♂ (66. ex from Iriomote Is., Ryukyus ; 67. Yaku Is., Satsunans).

mm.

Head and pronotum dark reddish brown or reddish black, elytra black, shiny ; labrum and mandibles reddish brown, faintly dark in part, palpi and antennae light reddish brown to reddish brown, antennal segment 1 faintly dark, lateral explanate-reflexed areas of pronotum (and hypomera also) and lateral margin (dark at humeral area) of elytra yellow, more or less brownish, elytral interval 1 sometimes yellowish-reddish at apical area, legs reddish brown, femora dark at apical half, tibiae more or less dark on outer area ; elytral patches (vid. following paragraph) brownish yellow, pre-basal patch on intervals 3 to 7 or 8, prolonged posteriorly and longest on interval 4, subapical patch covering intervals 1 or 2 to 8, prolonged anteriorly and posteriorly and longest on interval 4, yellow part on interval 5 generally a little more protrudent forward than that of interval 4 though nearly one-half as long as latter ; ventral side dark reddish brown, darker laterally, epipleura yellowish brown or dirty brownish yellow.

Head somewhat convex between eyes, frons with shallow depression on either side before mid-eye level; dorsal side impunctate or very minutely punctate, not rugose; microsculpture distinct, isodiametric; neck-constriction well visible on dorsal side; WH/WF 1.87-1.95, mean 1.91, in four ♂♂ and two ♀♀ from Japan and Formosa; frons with two longitudinal carinae along inner margin of eyes, inner carinae obscure; frontal impressions rather distinct; labrum (Fig. 58) generally one and one-fourth times as wide as long, fairly contracted apically, apex rather narrow, emarginate, outer setae fully distant from apex, fairly behind level of inner setae, four inner setae inserted along emargination.

Pronotum (Fig. 54) convex, widest at one-third; in four ♂♂ and two ♀♀ from Japan and Formosa, WP/WH 1.15-1.31, mean 1.21, WP/LP 1.69-1.82, mean 1.73, WP/WBP 1.11-1.15, mean 1.13; surface impunctate, faintly rugose; microsculpture distinct, forming transverse meshes; apex shallowly emarginate, border complete or indistinct at median area; apical angles slightly protrudent, well rounded; base bordered except lateral areas, border sometimes faint; basal angles fairly obtuse, sometimes dull; lateral margins well rounded anteriorly, gently, straightly contracted posteriorly, hardly or slightly sinuate before basal angles; median line distinct, not or faintly reaching both extremities; anterior and posterior transverse impressions distinct; basal foveae deep, wide.

Wings normal. Elytra rather convex, widest at about middle; WE/WP 1.74-1.79, mean 1.77, in two ♂♂ and two ♀♀, a little more than one and one-third to one and two-fifths times as long as wide; surface impunctate; microsculpture well visible, forming transverse meshes; basal border moderately rounded at shoulder; inner apical angle rather rounded, not dentate; striae deep, not punctate; intervals well convex, interval 3 with three pores at one-twelfth or -eleventh, two-thirds and before apex, first pore adjoining stria 3, second and third pores adjoining stria 2; marginal series hardly interrupted, with fifteen pores.

Hind tarsi slightly shorter than head width, segment 1 less than to more than twice as long as segment 2, segment 5/segment 1=0.61-0.67.

Aedeagus rather slender, somewhat curved ventrally before apex, apical orifice on left lateroventral side; apical lamella as long as or a little wider than long, lateral margins shortly parallel or rather contracted apically, apex not pointed but well rounded.

Styluses (Sata ex.) as in Fig. 52.

Variation of elytral patches. The patches are fairly variable in this species. The two Formosan examples (Urai, T. KANO leg.)—I have examined them thanks to Professor T. NAKANE—have the elytral patches moderately large (Fig. 68 b), anterior one covers the third to seventh intervals (obscurely the inner half of the eighth interval in one example),

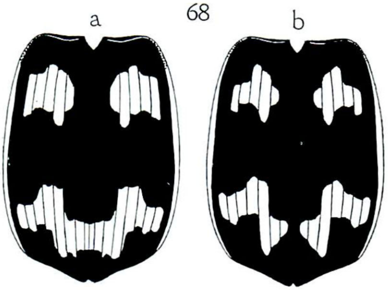


Fig. 68. Variation of elytral patches in *Coptodera* (*Coptoderina*) *marginata* Dupuis.

and the posterior one is on the second to eighth intervals, and the first interval is not yellowish-reddish throughout. The single specimen from Iriomote Is., Ryukyus (Fig. 66), has the anterior patch becoming obscure and fully short on the sixth interval, and the posterior patch extends onto the first interval, reaching the suture. The patches in the two specimens from Yaku Is., Satsunans (Fig. 67), are fairly larger than in others, the anterior one fully extends onto the eighth interval, a little stretches on the second interval in one example, the posterior patch reaches the suture, and the first interval is yellowish-reddish between the posterior patch and the apex. The single specimen from Sata, Kyushu (Fig. 68 a), resembles the Yaku ones, but the patches are a little smaller, the first interval being likewise yellowish-reddish at the apical area. On account of small materials I cannot decide whether these variations are geographical or not.

Distribution. Japan: Kyushu—Sata, Kagoshima Pref. (1 ♀, H. Hasegawa leg.); Satsunans—Yaku Is. (1 ♂[16], 1 ♀, Miyanoura, through Mr. T. Shibata); Ryukyus—Iriomote Is. (1 ♂, Shirahama, K. Iha leg.). Formosa.

Remarks. I consider the above Japanese specimens identical with those of the Formosan *C. marginata* though there remains some doubt.

II) *subapicalis*-group

Revised characteristics. Mid tibiae of ♂ with one incision before apex on ventral side; mid tarsi of ♂ with or without adhesive hairs[17] ventrally. Prosternum with pubescent area at middle in ♂, not in ♀.

31. *Coptodera* (*Coptoderina*) *subapicalis* Putzeys

"Hagi-kinoko-gomimushi"

Coptodera subapicalis Putzeys, 1877, Deutsch. Ent. Zeitschr., 21: 84–85 (Japan); Bates, 1883, Trans. Ent. Soc. Lond.: 281; Andrewes, 1927, Ann. Mag. Nat. Hist., (9) 20: 271; Habu, 1942, Kontyû, 16: 79; Habu, 1950, Icon. Ins. Jap. (rev. ed.): 946, fig. 2690; Jedlička, 1963, Ent. Abh., 28: 341, 344, pl. 4, fig. 52.

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[16] The genitalia are unfortunately teneral.

[17] The single male specimen of *C. eluta* Andrewes on hand is not in good condition to observe them.

Coptoderina subapicalis PUTZEYS: OHKURA and UÉNO, 1955, Coloured Illustr. Ins. Japan, Col.: 106, pl. 39, fig. 134; OHKURA and UÉNO, 1955, *do.* (rev. ed.): 42, pl. 11, fig. 208; NAKANE and OHKURA, 1956, Ent. Rev. Japan, 7: 46, 47, 49; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 51, pl. 26, fig. 4; UÉNO, 1964, Kontyû, 32: 263; NAKANE, 1975, Gakken Chû-Kô-Sei Zukan, Ins. 2 (Col.): 338-339, pl. 44.

Coptodera (*Coptoderina*) *subapicalis* PUTZEYS: HABU, 1957, Kontyû, 25: 116; HABU, 1961, Ent. Rev. Japan, 12: 46, pl. 8, fig. 2; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 83, 89-91, figs. 172, 174, 178, 184, 187, pl. 13-fig. 3.

Coptodera (*Coptoderina*) *subapicalis* PUTZEYS f. *mona* HABU, 1961, Ent. Rev. Japan, 12: 46, pl. 8, fig. 2 B.

Coptodera subapicalis mona HABU: JEDLIČKA, 1963, Ent. Abh., 28: 344, fig. 231.

Supplemental description. Labrum (Fig. 59) a little (at most one-eighth) wider than long, fairly contracted apically, apex narrow, emarginate, outer setae fully separated from apex, fully behind level of inner setae which are inserted almost in straight line. WH/WF 1.73-1.82, mean 1.76, WP/WH 1.21-1.27, mean 1.25, WP/LP 1.70-1.81, mean 1.77, WP/WBP 1.13-1.18, mean 1.16, WE/WP 1.64-1.69, mean 1.67, in five ♂♂ and five ♀♀. Pronotum with lateral explanate-reflexed areas (yellowish areas) relatively narrow, not distinctly restricted from median convexity. Mid tarsi of ♂ with adhesive hairs on segments 1 and 2 ventrally; hind tarsi seven-eighths to nine-tenths as long as head width, segment 1 less than twice to two and one-fifth times as long as segment 2, segment 5/segment 1=0.61-0.67.

69

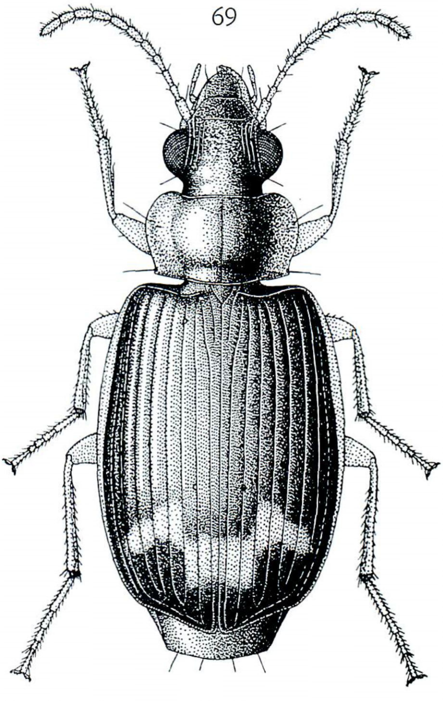

Fig. 69. *Coptodera* (*Coptoderina*) *subapicalis* PUTZEYS, ♀.

Distribution. Japan: Hokkaido—Mt. Kogashi (M. IMAIZUMI leg.); Honshu; Shikoku; Kyushu; Satsunans—Amami-ôshima Is. (Y. MIYAKE leg.).

32. *Coptodera* (*Coptoderina*) *esakii* (NAKANE)

"Esaki-kinoko-gomimushi"

Coptoderina esakii esakii NAKANE, 1956, Akitu, 5: 104, fig. (Japan: Satamisaki); NAKANE and OHKURA, 1956, Ent. Rev. Japan, 7: 46, 47, 49, pl. 10, fig. 4; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 51, pl. 26, fig. 5: UÉNO, 1964, Kontyû, 32: 263.

Coptodera (*Coptoderina*) *esakii esakii* NAKANE: HABU, 1957, Kontyû, 25: 116; HABU, 1961, Ent. Rev. Japan, 12: 46; SHIBATA, 1964, Ent. Rev. Japan, 17: 41.

Coptodera (*Coptoderina*) *esakii* NAKANE: HABU, 1967, Faun. Jap., Carab., Truncatipen.: 83, 92–93, fig. 181, pl. 3-fig. 2; HABU, 1975, Trans. Shikoku Ent. Soc., 12: 80.

Supplemental description. Labrum (Fig. 60) slightly wider than long, fairly contracted apically, apex narrow, emarginate, outer setae well distant from apex, distinctly behind level of inner setae, inner setae inserted almost in straight line. WH/WF 1.79–1.86, mean 1.82, WP/WH 1.19–1.25, mean 1.21, WP/LP 1.68–1.82, mean 1.74, WP/WBP 1.16–1.20, mean 1.18, in three ♂♂ and one ♀, WE/WP 1.72, 1.80 in two ♂♂. Pronotum with lateral explanate areas wide, rather defined from median convexity. Mid tarsi of ♂ without adhesive hairs ventrally; hind tarsi a little shorter than head width, segment 1 twice (in Sata ex.) or one and three-fourths times (in Okinawa ex.) as long as segment 2, segment 5/segment 1=0.65–0.69.

Distribution. Japan: Kyushu—Sata, Kagoshima Pref.; Satsunans; Ryukyus—Okinawa Is. (southwestern limit).

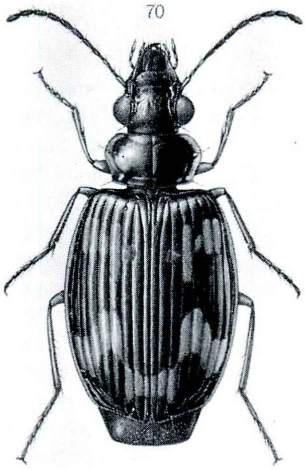

Fig. 70. *Coptodera* (*Coptoderina*) *esakii* (NAKANE), ♂.

33. *Coptodera* (*Coptoderina*) *taiwana* (NAKANE)

"Taiwan-kinoko-gomimushi"

Coptoderina esakii taiwana NAKANE, 1956, Akitu, 5: 104 (Formosa: "Tyokakurai"); NAKANE and OHKURA, 1956, Ent. Rev. Japan, 7: 46, 47, 49, pl. 10, fig. 4 d′.

Coptodera esakii taiwana NAKANE: JEDLIČKA, 1963, Ent. Abh., 28: 348.

Coptodera (*Coptoderina*) *esakii taiwana* NAKANE: SHIBATA, 1964, Ent. Rev. Japan, 17: 41, pl. 2, fig. 5.

Coptodera (*Coptoderina*) *taiwana* NAKANE: HABU, 1967, Faun. Jap., Carab., Truncatipen.: 83, 93, figs. 182, 186.

Supplemental description. Labrum (Fig. 61) slightly wider than long, more contracted apically and apex narrower than in *esakii*, outer setae widely distant from emarginate apex. WH/WF 1.79–1.91, mean 1.81, WP/WH 1.19–1.28, mean 1.23, WP/LP 1.69–1.80, mean 1.74, WP/WBP 1.12–1.19, mean 1.16, WE/WP 1.66–1.77, mean 1.70, in five ♂♂ and five ♀♀. Mid tarsi of ♂ without adhesive hairs ventrally; hind tarsi seven-eighths to eleven-twelfths as long as head width, segment 1 a little more than twice as long as segment 2, segment 5/segment 1=0.61–0.66.

Distribution. Japan: Ryukyus—Ishigaki Is. (after SHIBATA, 1964) (eastern limit), Iriomote Is. (K. IHA leg.). Formosa.

34. *Coptodera* (*Coptoderina*) *eluta* ANDREWES

"Madara-kinoko-gomimushi"

Coptodera interrupta SCHMIDT-GOEBEL: CHAUDOIR, 1869, Ann. Soc. Ent. Belg., 12: 194–195; BATES, 1886, Ann. Mag. Nat. Hist., (5) 17: 203; BATES, 1892, Ann. Mus. Civ. Stor. Nat. Genova, (2) 12 (32): 411.

Coptodera elegantula SCHMIDT-GOEBEL: BATES, 1889, Ann. Mus. Civ. Stor. Nat. Genova, (2) 7 (27): 111; BATES, 1892, Ann. Mus. Civ. Stor. Nat. Genova, (2) 12 (32): 411–412.

Coptodera eluta ANDREWES, 1923, Trans. Ent. Soc. Lond.: 30 (without type-designation); ANDREWES, 1930, Treubia, 7, suppl.: 336; LOUWERENS, 1956, Treubia, 23: 225; JEDLIČKA, 1963, Ent. Abh., 28: 341, 342, 349–350, fig. 103; LOUWERENS, 1967, Ent. Medd., 35: 210; DARLINGTON, 1968, Bull. Mus. Comp. Zool., 137: 113, 115; LOUWERENS, 1969, Ent. Medd., 37: 364.

Coptoderina eluta reductemaculata NAKANE and OHKURA, 1956, Ent. Rev. Japan, 7: 46, 47, 49, pl. 10, fig. 5 (Formosa: "Mt. Ari; Mokuriryo near Mt. Ari").

Coptodera madara HABU, 1957, Kontyû, 25: 114–116, figs. 1, 2 (Japan: Kurokawa; Iijima); JEDLIČKA, 1963, Ent. Abh., 28: 350, fig. 232.

Coptodera (*Coptoderina*) *eluta reductemaculata* NAKANE et OHKURA: HABU, 1959, Kontyû, 27: 259; HABU, 1961, Ent. Rev. Japan, 12: 46; SHIBATA, 1964, Ent. Rev. Japan, 17: 40–41, pl. 2, fig. 4.

Coptodera eluta ANDREWES ab. *unicolor* JEDLIČKA, 1963, Ent. Abh., 28: 347.

Coptodera (*Coptoderina*) *eluta* ANDREWES: HABU, 1967, Faun. Jap., Carab., Truncatipen.: 83, 93–96, figs. 175, 177, 188, pl. 13-fig. 4.

Supplemental description. Labrum (Fig. 62) wider than in three preceding spp., one and one-fourth times as wide as long, more contracted apically, apex narrow, fairly emarginate, outer setae fully behind level of inner setae, four inner setae inserted almost in straight line. WH/WF 1.86, 1.83, WP/WH 1.26, 1.27, WP/LP 1.78, 1.80, WP/WBP 1.16, 1.18, in one ♂ and one ♀ respectively, WE/WP 1.58 in one ♂. Pronotum with lateral explanate-reflexed areas wide, not distinctly defined. Hind tarsi nine-tenths as long as head width, segment 1 less than twice as long as segment 2, segment 5/segment 1=0.63 (in one ♂).

Distribution. Japan: Honshu—Kurokawa, Niigata Pref. (K. BABA leg.), Iijima, Nagano Pref. (A. HABU leg.); Ryukyus—Ishigaki Is. (after SHIBATA, 1964). Formosa. Philippines. New Britain. New Guinea. Indo-China. Malaya. Thailand. Burma. Ceylon. India.

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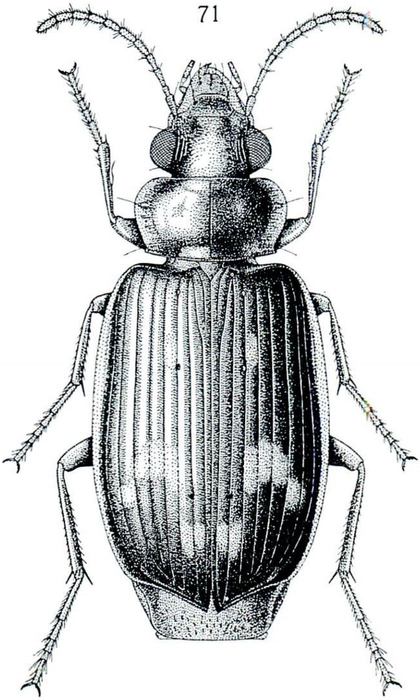

Fig. 71. *Coptodera* (*Coptoderina*) *eluta* ANDREWES, ♀.

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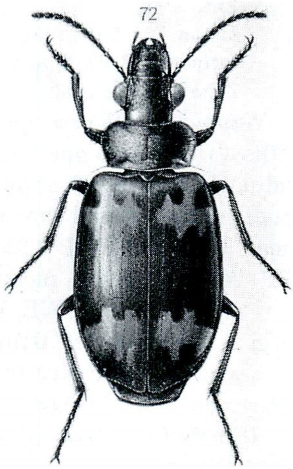

Fig. 72. *Lioptera erotyloides* BATES, ♀.

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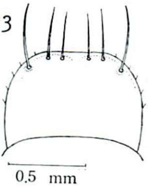

Fig. 73. Labrum of *Lioptera erotyloides* BATES.

Genus *Lioptera* CHAUDOIR

Type-species: *Lioptera quadriguttata* CHAUDOIR from Philippines (monotypic).
Lioptera CHAUDOIR, 1869, Ann. Soc. Ent. Belg., 12: 208.

Supplemental description. Labrum (Fig. 73) less contracted apically than in *Coptodera*. Mid tarsi of ♂ with adhesive hairs on segments 1 and 2 ventrally.

35. *Lioptera erotyloides* BATES

"Kinoko-gomimushi"

Lioptera erotyloides BATES, 1883, Trans. Ent. Soc. Lond.: 280–281, pl. 13, fig. 5

(Japan: "Yuyama; Junsai"); HELLER, 1903, Ann. Soc. Ent. Belg., 47: 242, 245–246; OHKURA and UÉNO, 1955, Coloured Illustr. Ins. Japan, Col.: 107, pl. 39, fig. 136; OHKURA and UÉNO, 1955, *do.* (rev. ed.): 42, pl. 11, fig. 210; NAKANE, 1963, Icon. Ins. Jap., Colore natur. edit., 2: 51, pl. 26, fig. 8 ; JEDLIČKA, 1963, Ent. Abh., 28: 339, 340, pl. 2, fig. 13; NAKANE et al., 1966, Hyôjun Genshoku Zukan Zenshû, 2: 46, pl. 21, fig. 26; HABU, 1967, Faun. Jap., Carab., Truncatipen.: 97–99, figs. 189–192, pl. 3-fig. 3; NAKANE, 1975, Gakken Chû-Kô-Sei Zukan, Ins. 2 (Col.): 233, pl. 44.

Supplemental description. Labrum (Fig. 73) more than one and two-fifths to one and one-half times as wide as long, not or faintly, longitudinally depressed at middle, outer setae a little behind level of four inner setae which are inserted in straight line. WH/WF 1.62–1.73, mean 1.69, WP/WH 1.22–1.37, mean 1.30, WP/LP 1.89–2.03, mean 1.98, WP/WBP 1.10–1.17, mean 1.13, WBP/WAP 1.47–1.60, mean 1.52, in four ♂♂ and five ♀♀, WE/WP 1.53, 1.59, 1.60 in one ♂ and two ♀♀. Hind tarsi a little shorter than or as long as head width, segment 1 one and six-sevenths to twelve-thirteenths times as long as segment 2, segment 5/segment 1=0.75–0.88.

Distribution. Japan: Hokkaido; Honshu; Kyushu. Formosa. S. China: Fukien (after JEDLIČKA, 1953). Indo-China: Tongking (after JEDLIČKA, 1963 b).

New or Little-known Tenebrionidae from Formosa (II)

By KIMIO MASUMOTO

In this second series, 1 new genus, *Taiwanotagalus* of the tribe Phrenapatini, and 6 new species of the tribe Diaperini are described for the first known time.

Dr. Z. KASZAB of the Hungarian Natural History Museum contributed many specimens and kindly offered constant advice. Mr. S. KONDO also contributed specimens and literature. Mr. T. ENDO drew the fine illustrations for this series. Dr. Y. KUROSAWA, Dr. T. NAKANE and Dr. S.-I. UÉNO offered valuable advice and aid.

I should like to express my gratitude to the above gentlemen, and also to Messrs. H. YOKOYAMA and K. KINUGASA, who offered specimens for study.

Taiwanotagalus klapperichi gen. et sp. nov.

Yellowish brown; apical portions of mandibles brownish; moderately shining. Oblong, subparallel-sided; rather strongly convex.

Head transverse, moderately convex above and slightly forward in posterior portion; coarsely and rather closely punctate; frontal suture fine but distinct, both ends reaching outer margin; clypeus short and narrow, crescent-like, feebly depressed, scattered with small but coarse punctures like frons, with front margin sublinear, very feebly produced on both sides; genae feebly raised, with outer margins broadly rounded; eyes small, very feebly roundly produced laterally; interocular space very broad, about 8 times eye diameter; antennae relatively short and moderately flattened, sparsely haired on a few apical joints, length about 4/7 breadth of head, 9 joints distinctive, basal one large and stout, 2nd subquadrate, 3rd triangular, 4-6th compressed and transverse, 7th relatively large and triangular, 8th unremarkable, 9th very large and trapezoid, 10th unremarkable, fused with following joint, divided by transverse suture near base of 11th, 11th very large and round.

Pronotum subquadrate (breadth: length = 10.0 : 6.0), broadest at frontal 1/4, roundly narrowed forward, moderately and sublinearly narrowed to base; front border feebly arcuate forward; basal border broadly produced and finely margined; sides distinctly grooved along outer margins and a little reflexed; front angles quite narrowly, roundly projected forward; hind angles obtuse; disc rather strongly convex, coarsely and

〔Ent. Rev. Japan, Vol. XXXVI, No. 2, pp. 143-152, Jan., 1982〕

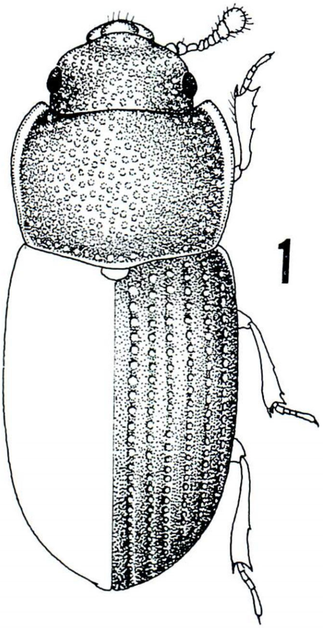

Fig. 1. *Taiwanotagalus klapperichi* gen. et sp. nov.

rather closely punctate, punctures set about 1–3 times their diameter apart. Scutellum small and nearly pentagonal, smooth.

Elytra about 1.5 times as long as broad, subparallel-sided, a little broader than pronotum at base; dorsum rather strongly convex, softly flattened in middle, steeply declined in lateral portions; disc with 9 striae (including scutellary and marginal), strial punctures large and deep, distance between them about 1–2 times their diameter; intervals moderately convex, irregularly and sparsely scattered with microscopic punctures; sides distinctly grooved along lateral margins; epipleura entire and broad.

Mentum trapezoid, raised along median, shallowly punctate, depressed and rugose on both sides; mandibles each with 3 apical teeth.

Prosternum shagreened, coarsely punctate, raised in intercoxal space and bisulcate, with prosternal process broadly semicircular, depressed and rimmed; mesosternum rather short, moderately depressed, coarsely punctate, with hind border raised; metasternum smooth, coarsely punctate (sparser than pro- and mesosternum). Abdomen coarsely and more sparsely punctate.

Legs rather short; femora moderately thickened; tibiae rather distinctly widened toward apex (especially so in fore tibiae), with few outer thorns on fore and middle tibiae; tarsi and claws small.

Body length: ca. 2.2 mm.

Holotype: ♀, Fenchihu (1400 m), Chiayi Hsien, Formosa, 14 V 1977, J. Klapperich leg. (HNHM); paratypes: 6 exs., ditto.

This new genus *Taiwanotagalus* belongs to Phrenapatini, and is related to *Pseudophthora* Kaszab, 1970, but it is quite unique in having 9 distinctive antennal joints.

The new genus is characterized by the following points:— 1) the body is subrectangular, moderately convex and softly flattened, 2) the surfaces are coarsely punctate but almost without hairs, 3) the antennae have 9 distinctive joints; the 9th and 11th are very large, otherwise, the 10th is fused with the following joint, the 8th is estimated as obsolete, strongly compressed, and fused with the 9th joint, 4) the antennal grooves are on the underside of the head, 5) each mandible is armed with 3 apical teeth, 6) the apical joint of each maxillary palpus is cylindrical, 7) the eyes are small and only feebly produced laterally, 8) the pronotum is slightly widened toward the front and its lateral margins are conspicuously grooved, 9) the elytra have 9 punctate-striae each (including scutellary and marginal ones), and their lateral margins (9th striae) are also grooved, 10) the epipleura are entire and broad, 11) the fore and middle tibiae are armed with few outer thorns.

Platydema monoceratoides sp. nov.

Dark reddish brown; fore head, antennae, apex of horn, margins of pronotum, abdomen, lighter in color, legs and undersurface (except abdomen) more yellowish; each elytron with two yellowish dentate fasciae, one before and another near apex; anterior fascia spreading from 2nd interval to middle of 9th, nearly reaching base of elytra in both 3rd and 7th, produced posteriorly in 3rd and 5th, usually well-produced in 3rd; posterior fascia nearly triangular, spreading from 2nd to 8th, produced anteriorly in 3rd; upper surface moderately shining. Slightly elongate oval; rather strongly convex above.

Head semicircular, fairly closely and finely punctate, strongly raised in posterior half, flattened in anterior half; frons sparsely punctate; fronto-clypeal border arcuate backward; clypeus feebly convex; genae oblique; eyes very large, roundly produced laterally, distance between them a little more than their diameter; vertex armed with horn, its surface flattened, sides parallel, obtusely pointed, feebly curved upward near apex; interocular space with oblique, oblong excavations slightly before horn just inside eyes; antennae barely reaching base of pronotum, 4th to 11th softly flattened and somewhat club-like, 4th to 10th roughly triangular, 11th ovoid, relative length of each joint (base to apex):— 1.1, 0.4, 0.9, 1.0, 0.8, 0.7, 0.6, 0.6, 0.6, 0.6, 1.0.

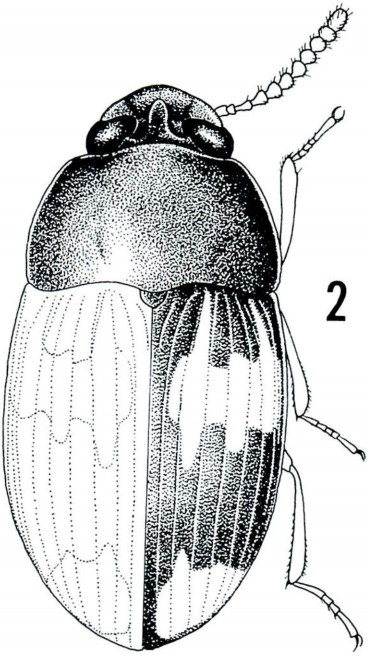
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Fig. 2. *Platydema monoceratoides* sp. nov.

Pronotum transverse and nearly trapezoid (breadth : length = 14.0 :

6.5), broadest at base and roundly narrowed to front; front border very feebly emarginate and median half nearly straight, finely margined; basal border moderately bulged in median ¼ and weakly sinuous on both sides; sides clearly margined; front angles rounded; hind angles obtuse; disc strongly convex, rather closely, finely and nearly evenly punctate, with faint oblique impression near base on both sides. Scutellum broadly triangular with rounded sides, flat and smooth.

Elytra 1.2 times as long as broad, 2.9 times longer than pronotum, broadest before middle, moderately narrowed to front and rear, rounded in apical portion; dorsum fairly strongly convex, thickest at basal ¼, feebly obliquely flattened in apical ⅓, nearly vertically declined in lateral portions; disc with rows of small punctures, often striated, distance between them about 1.5–3 times their diameter; intervals nearly flat in inner portion, feebly convex in lateral, rather closely scattered with fine punctures; sides distinctly canaliculate along fine reflexed margins.

Mentum somewhat trapezoid with obliquely arcuate sides, anterior-median portion raised, roundly depressed in posterior portion and sharply projected in middle; hind underside of head microscopically shagreened, rugose on gena; gula narrowly triangular; terminal joint of maxillary palpus relatively large, with arcuate outer side about twice length of inner, 2.2 times length of apical.

Prosternum reflexed in front, coarsely wrinkled, prosternal process sharply pointed to rear; mesosternum with Y-shaped elevation in center of hind border; metasternum micro-shagreened, sparsely pubescent, scattered with few punctures in lateral portions, with distinct median groove in posterior ⅔. Abdomen closely, finely and setaceously punctate, punctures on 2 apical sternites much finer, rather longitudinally wrinkled on 3 anterior sternites, especially distinct in lateral portions. Relative length of each tarsal joint (base to apex):— 0.7, 0.4, 0.4, 0.3, 1.1; 1.2, 0.4, 0.3, 0.3, 1.0; 2.0, 0.9, 0.6, 1.4, respectively.

Aedeagus elongate fusiform.

Female more strongly convex above; head moderately convex in posterior half without horn or excavations; punctures on head and pronotum relatively stronger; legs comparatively thicker.

Body length: ca. 4.5 mm.

Holotype: ♂, Yangmingshan, Taipei City, Formosa, 27 VI 1981, K. MASUMOTO leg.; paratypes: 7 exs., ditto.

This new species somewhat resembles both *Platydema monoceros* GEBIEN, and *P. aurimaculatum* GRAVELY, each from the South East Asia, but is differentiated from the former by its dentate markings on the elytra, and from the latter by its more distinct horn on the head of the male, also by its smaller hind markings and by its broadly flattened (nearly horizontal) fore head in each sex.

Platydema parachalceum sp. nov.

Dark reddish brown; posterior portion of head darker, margins of pronotum and elytra, legs, underside, more or less lighter in color; upper surface strongly shining with feebly brassy tinge, underside moderately shining. Slightly elongate oval; strongly convex above.

Head semicircular, microscopically, rather closely punctate, rather strongly convex in basal half, nearly flat and horizontal in anterior; frons fairly steeply sloping toward fronto-clypeal border, with broadly V-shaped groove medianly reaching flattened anterior area; fronto-clypeal border finely grooved, arcuate backward, with both ends bent obliquely forward and extended straightly to outer margin; clypeus feebly but broadly convex in middle; genae rather narrow, with outer margins obliquely rounded, shallowly and irregularly depressed just before eyes; eyes fairly large and oblique-transverse, roundly produced laterally, distance between them about 3/5 their diameter; antennae hardly reaching base of pronotum, 3 basal joints nearly cylindrical, 8 following joints softly flattened, 4th to 10th roughly triangular, 11th oblong ovoid, relative length of each joint (base to apex):— 1.1, 0.6, 1.4, 1.2, 0.9, 0.8, 0.8, 0.8, 0.8, 0.8, 1.5.

Pronotum rather strongly transverse (breadth : length = 19.5 : 8.5), broadest at base, sublinearly obliquely narrowed in basal 4/7, then roundly narrowed forward; front border broadly arcuate-emarginate, finely margined but margin slightly thickened on both sides; basal border roundly bulged in median 1/3, sinuous on both sides; sides narrowly canaliculate, with fine reflexed margins; front angles rounded; hind angles obtuse with very shortly, obliquely truncated tips; disc rather strongly convex, rather closely, minutely punctate, with short longitudinal impression just near base on both sides. Scutellum triangular with rounded sides, scattered with few minute punctures anteriorly.

Elytra 1.3 times as long as broad, 3.9 times longer than pronotum, moderately arcuate laterally, broadest at basal 3/5; dorsum strongly convex, thickest at middle, very feebly depressed after scutellum; disc with rows of small punctures, often striated, distance between them 1–3 times their diameter, with 6th stria noticeably approaching 5th near base; intervals nearly flat, rather closely scattered with minute punctures; sides more distinctly canaliculate than pronotum, finely reflexed along margins; apexes very slightly acuminate.

Mentum subcordate, anterior-median portion raised and bluntly pointed; gena coriaceous; gula triangular, shagreened, with small Λ-shaped impression at top; terminal joint of each maxillary palpus with arcuate outer side about twice length of inner and 1.5 times length of apical.

Prosternum coriaceous, finely margined in front, raised in posterior-median, with prosternal process distinctly elongate oval and fairly sharply pointed; mesosternum short, with narrowly V-shaped elevation at middle of hind border; metasternum long, very smooth and sparsely scattered with minute punctures in middle, coriaceous in lateral portions, with median groove in apical $5/7$. Abdomen closely, finely, setaceously punctate, somewhat coriaceous in 3 anterior sternites, punctures finer in 2 apical sternites, shortly pubescent along outer margin of anal sternite.

Legs moderate-sized, outer margin of each tibia somewhat finely serrated, relative length of each tarsal joint (base to apex) :— 1.3, 0.7, 0.7, 0.6, 2.2; 2.1, 1.0, 0.8, 0.6, 3.0; 3.7, 1.5, 1.1, 2.6.

Aedeagus slender.

Body length: 7 mm.

Holotype: ♂, Meifeng, Nantou Hsien, Formosa, 11 VI 1973, H. YOKOYAMA leg.

Dr. Z. KASZAB kindly informed me that this new species is allied to *Platydema chalceum* GEBIEN from Java. The new species differs from the nominate species in having a slightly different luster (in the case of *P. chalceum*, it is strong greenish bronze), a frons distinctly narrower than eye diameter anteriorly, much closer punctures on the pronotum and the elytra, and smaller punctures in rows on the elytra.

Platydema yangmingense sp. nov.

This new species closely resembles *Platydema marseuli* LEWIS from Japan, but is differentiated from the nominate species by the following characteristics:

Darker in color with a slightly stronger greenish luster. Body comparatively smaller; more strongly convex above.

Head slightly more transverse; front margin broadly arcuate; eyes more oblique; horns often well-developed, directed forward (in the case of *P. marseuli*, clearly up- and forward), with right horn slightly curved upward, left one slightly downward each in apical half.

Pronotum relatively broader (breadth: length=13.5 : 6.5), especially remarkable in anterior portion. Scutellum comparatively smaller.

Elytra more elongate (length: breadth=24.0 : 15.5), about 3.7 times longer than pronotum, strongly convex and steeply declined in lateral portions; disc with strial punctures slightly closer; scutellary striole rather longer.

Undersurface distinctly, closely and finely setaceously punctate. Terminal joint of each maxillary palpus with apical side more oblique. Prosternal process more sharply pointed.

Tibiae comparatively strongly widened to apex; relative length of each metatarsal joint (base to apex):— 1.7, 0.8, 0.7, 2.3.

Aedeagus more slender in apical half.

Body length: ca. 4.5 mm.

Holotype: ♂, Yangmingshan, Taipei City, Formosa, 27 VI 1981, K. MASUMOTO leg.; paratypes: 8 exs., ditto, 1 ex., Nanshanchi, Nantou Hsien, 30 VI 1965, T. NAKANE leg.

H. GEBIEN wrote in 1925 that *P. marseuli* occurs not only in Japan, but also widely in the South East Asia including Formosa. In his paper of 1967, M. T. CHÛJÔ reported this species from Formosa (as he believed the first time).

Platydema tuchinlongi sp. nov.

This new species also somewhat resembles *Platydema marseuli* LEWIS from Japan, but is easily distinguishable from the nominate species in the following points:

Lighter in color. Body slightly more elongate.

Head comparatively narrow; front margin semicircular with very small prominence at median; clypeus moderately convex, broadly in middle; genae nearly horizontal; eyes transverse, roundly produced laterally; horns inside eyes very well-developed, nearly subparallel, pointing up- and moderately forward, area between them more deeply excavated.

Pronotum broader and nearly trapezoid (breadth : length = 12.7 : 6.0); front border very feebly bisinuate-emarginate, finely margined but margin feebly thickened toward both angles; basal border nearly straight but roundly bulged in median ⅓; sides obliquely, broadly arcuate, more distinctly margined; front angles obtuse; hind angles subrectangular with shortly, obliquely truncated tips; disc with basal impressions.

Elytra slightly more elongate, 1.4 times as long as broad, 3.7 times longer than pronotum; disc with strial punctures slightly closer, 5th stria remarkably deepened near base and rather strongly, distinctly curved outward before middle; sides also more distinctly margined.

Undersurface more closely, setaceously punctate. Underside of hind head more strongly convex. Terminal joint of each maxillary palpus with apical side more oblique and arcuate.

Mesosternum with Y-shaped elevation more distinctly and strongly elevated; metasternum with longer, more distinct median groove. Abdomen more noticeably wrinkled on 3 anterior sternites.

Legs relatively shorter; tibiae slightly thicker; relative length of each metatarsal joint (base to apex):— 1.5, 0.8, 0.6, 1.4.

Aedeagus clearly slender.

Body length: ca. 4.5 mm.

Holotype: ♂, Nanshanchi (800 m), Nantou Hsien, Formosa, 30 VI 1965, T. YAMAZAKI leg.; paratype: 1 ex., Shanmei (600 m), 23 V 1977, J. KLAPPERICH leg., (HNHM).

The new species is named after Mr. TU CHINLONG, my good friend living in Nanshanchi, in gratitude for his help and co-operation.

Scaphidema formosanum sp. nov.

Reddish brown to yellowish brown; head (except anterior portion), disc of pronotum, scutellum, 8 apical joints of antennae, darker; elytra with blackish markings as shown in fig. 3; rather strongly shining. Oblong oval; moderately convex above.

Head transverse, softly flattened anteriorly, finely punctate; frons rather wide, moderately sloping to fronto-clypeal border; clypeus extremely transverse with front margin nearly straight, rather closely punctate, microscopically shagreened, sparsely haired on both sides; genae with outer margin obliquely rounded, obtusely raised, rather closely and finely punctate but sparsely so in posterior half; interocular space wide, about 3 times eye diameter, with shallow spot-like impression in middle; eyes transverse, moderately convex above, narrowly roundly produced laterally; antennae medium-sized, reaching base of pronotum, rather densely pubescent on apical joints, gradually thickened to apex, 4th joint to 10th distinctly flattened and triangular, 11th ovoid; relative length of each joint (base to apex):— 1.3, 0.7, 1.2, 1.3, 1.1, 1.3, 1.2, 1.3, 1.3, 1.2, 1.9.

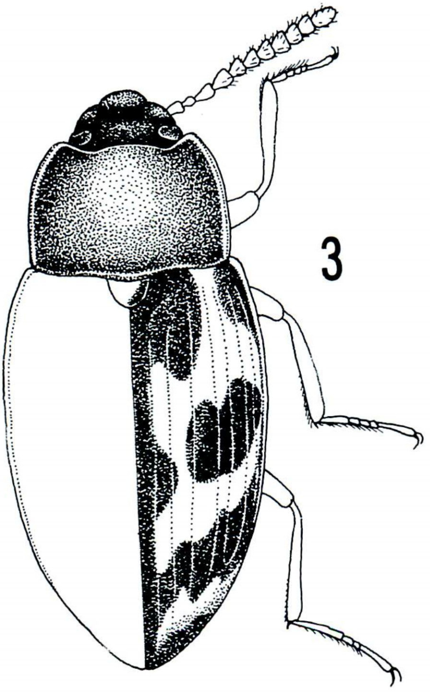

Fig. 3. *Scaphidema formosanum* sp. nov.

Pronotum transverse (breadth: length=12.0: 6.5), broadest at base, subparallel-sided in basal 1/5, then gradually narrowed forward; front border strongly emarginate, sublinear in median half, finely but clearly margined, margin interrupted at middle; basal border feebly produced, slightly roundly produced further in median 1/4, shallowly margined but vaguely so medianly;

sides narrowly explanate and finely reflexed along margins; front angles narrowly rounded and produced; hind angles obuse; disc moderately convex, finely punctate; punctures finer and sparser than those on head. Scutellum relatively large, feebly depressed, triangular with rounded sides, microscopically punctate.

Elytra a little more than 1.5 times as long as broad, about 4.3 times longer than pronotum, gradually widened from base, broadest at middle, then roundly narrowed to apex; dorsum moderately convex above, very softly flattened in anterior-median portion, feebly laterally convex in posterior portion; disc with fine punctate-striae, punctures set 1-2 times their diameter apart; intervals nearly flat, rather closely and finely punctate, punctures a little larger than those on pronotum, slightly smaller than those on head; sides distinctly margined from base to just before apex and a little expanded obliquely downward.

Mentum semicircular, feebly raised anteriorly; gula narrow, bordered by grooves; terminal joint of maxillary palpus oblong.

Prosternum with front border feebly and finely reflexed, raised medianly, softly flattened between coxal cavities, sparsely and shallowly punctate, microscopically shagreened, with prosternal process nearly tongue-shaped; mesosternum with V-shaped elevation meeting hind border, finely punctate and pubescent; metasternum nearly smooth, shallowly punctate laterally, wrinkled posteriorly. Abdomen very finely punctate, microscopically shagreened.

Legs without any special characteristics; relative length of each tarsal joint (base to apex):— 1.0, 0.7, 0.6, 0.4, 1.9; 1.8, 0.7, 0.5, 0.4, 2.2; 3.2, 0.7, 0.4, 2.3, respectively.

Body length: ca. 5 mm.

Holotype: ♂, Near Meifeng, Jenai, Nantou, Formosa, 5 V 1978, T. NIISATO leg.; paratype: 1 ex., Meifeng, Nantou Hsien, 10 VIII 1975, K. MASUMOTO leg.

The new species is easily distinguished from the other known species by its markings on the elytra.

Ceropria kinugasai sp. nov.

This new species closely resembles *Ceropria induta* WIEDEMANN from the East Asia, but differs from it in the following characteristics:

Body darker in color; more elongate and subparallel-sided.

Head slightly more transverse, comparatively strongly convex, more closely punctate, with more distinct shallow median impression; frons comparatively steeply sloping in front; clypeus and genae more clearly depressed and nearly horizontal; eyes more oblique, more strongly but narrowly roundly produced laterally; antennae with 1st joint to 3rd subcylindrical, 4th to 11th flattened, 4th to 10th dilated to apex and serrated, relative length of each joint (base to apex) :— 1.5, 0.6, 1.4, 1.4, 1.3, 1.3, 1.3, 1.3, 1.3, 1.3, 1.4.

Pronotum more transverse (breadth : length = 24.0 : 14.0) ; front border bisinuate in median half ; basal border more distinctly roundly bulged in median ⅓ ; sides more strongly, roundly narrowed in anterior half ; front angles more obtuse.

Elytra more elongate (length : breadth = 46.5 : 30.5) and more strongly, longitudinally convex, distinctly compressed from sides at basal ⅖ in lateral portions ; intervals flatter, more closely and finely punctate, sides more deeply margined.

Mentum more transverse, more distinctly raised in anterior-median portion, clearly punctate. Metasternum more distinctly shallowly wrinkled.

Legs comparatively shorter ; fore tibiae less strongly curved ; relative length of each tarsal joint (base to apex) :— 1.7, 1.4, 1.4, 1.2, 4.7 ; 4.0, 1.6, 1.6, 0.8, 4.0 ; 6.5, 3.5, 2.5, 4.0, respectively.

Aedeagus shorter but broader, less strongly curved.

Body length : ca. 10 mm.

Holotype : ♂, Paling, Taoyuan Hsien, Formosa, 28 IV 1979, K. KINUGASA leg.